



SANITATION DEFICIENCY SYSTEM

S D S

Guide for Reporting Sanitation Deficiencies
for Indian Homes and Communities

WORKING DRAFT

May 2003

Division of Sanitation Facilities Construction
Office of Environmental Health and Engineering
Indian Health Service



Department of Health and Human Services
Public Health Service
Indian Health Service



PREFACE

The Secretary shall submit a report which sets forth the level of sanitation deficiency for each sanitation facilities project of each Indian tribe or community, and the amount of funds necessary to raise all Indian tribes and communities to a level I sanitation deficiency or to zero sanitation deficiency. *--from Public Law 94-437, Section 302(g)*

The Indian Health Service (IHS) Sanitation Deficiency System (SDS) is an inventory of the sanitation deficiencies of American Indian and Alaska Native communities; those sanitation deficiencies include needed water, sewer, and solid waste facilities for existing American Indian and Alaska Native homes. The sanitation deficiencies are identified and entered into the SDS by each of the 12 IHS Area Offices across the nation in consultation with the respective tribes in those Areas. The sanitation deficiency data is updated annually and reported to Congress as required by the Indian Health Care Improvement Act, Public Law 94-437, as amended (25 U.S.C. 1601 et seq).

This guide is required to ensure uniform Area standards and procedures for identifying deficiencies, for developing projects, and for prioritizing projects. All tribes, regardless of Sanitation Facilities Construction Program delivery method, report their SDS needs similarly and participate equally in the allocation process in accordance with Sections 302(g)(2) and (3) of Public Law 94-437.

This document is a Working Draft. Beginning in 2003, the SDS was initialized as an internet-based data entry and collection system rather than a personal computer based system. The policies for entering data into SDS have not changed significantly, and the eligibility requirements for receiving service from IHS have not changed; however, the appearance and data entry method of the SDS did change. Until the operational characteristics of the internet-based system are consistent with SDS and IHS policies, this document is published as a Working Draft and will be revised as needed over the next several SDS cycles.

This document was prepared by the staff of the Division of Sanitation Facilities Construction at IHS Headquarters, Rockville, Maryland. If you have any questions, please contact the Director, Office of Environmental Health and Engineering, at the appropriate IHS Area office.

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Abbreviations and Terminology

108 contract.....	Title I services contract under the authority of Section 108, P.L. 93-638.
A-87	see OMB A-87
A/E	Architect/Engineer
ACHP	Advisory Council on Historic Preservation
AFA.....	Annual Funding Agreement
AFAA.....	Annual Funding Agreement addendum
AI/AN.....	American Indian and Alaska Native
BIA.....	Bureau of Indian Affairs
CDBG.....	Community Development Block Grant program of the Department of Housing and Urban Development
CEQ.....	Council on Environmental Quality
CFR	Code of Federal Regulations
CHSDA	Contract Health Services Delivery Area
COR	Contracting Officer's Representative; often, the Project Engineer
CPA.....	Construction Project Agreement; a P.L. 93-638 Title V document
Criteria document.....	Indian Health Service. "Criteria for the Sanitation Facilities Construction Program." Latest copy.
CWA	Clean Water Act
CWF	Consolidated Working Fund account
DFS	Dental Fluoride Tracking System
DHEW.....	Department of Health, Education, and Welfare (now called DHHS or HHS)
DHHS.....	Department of Health and Human Services
DL	Deficiency Level in the SDS inventory
DOI.....	Department of the Interior
DOJ	Department of Justice
DOL	Department of Labor
DOT	Department of Transportation
DSFC.....	Division of Sanitation Facilities Construction, IHS
E.O.	Executive Order
EA	Environmental Assessment
EFA	Engineering Funding Agreement
EIS.....	Environmental Impact Statement
Environmental Review Manual	Indian Health Service. Environmental Review Manual. DEH, OEHE. March 1993.
EPA	Environmental Protection Agency
FAR.....	Federal Acquisition Regulation system
FDS	Facility Data System
FGCA.....	Federal Grants and Cooperative Agreements Act (P.L. 95-224)
FMB	Financial Management Branch
FOIA	Freedom of Information Act
FONSI.....	Finding of No Significant Impact

FR.....	Federal Register
FY.....	Fiscal Year
GAO.....	General Accounting Office
Grey Book.....	Indian Health Service. "Guidance for Title I Self-Determination Contract Negotiations for the Sanitation Facilities Construction Program and/or Projects." Latest copy.
HIP	Home Improvement Program of the Bureau of Indian Affairs
HPS	Housing Priority System
HQ SFC Program.....	Headquarters Sanitation Facilities Construction Program, IHS (see also DSFC)
HQ.....	Headquarters
HUD	Department of Housing and Urban Development
IAG.....	Interagency Agreement
IGD.....	Interim Guidance Document. Issued by the HQ SFC Program to clarify, update, or correct program policy or guidance documents. Previously called Interpretive Guidance Document.
IHA.....	Indian Housing Authority; now designated as TDHE under NAHASDA.
IHS	Indian Health Service
IMPAC.....	International Merchant Purchase Agreement Card; i.e., the Federal government credit card.
IPA	Intergovernmental Personnel Act - Temporary assignments of employees between federal agencies, State, local, Indian tribal governments, institutions of higher learning, and other eligible organizations.
IPAC.....	Intra-governmental Payment and Collection System (IPAC). Replaced OPAC.
ISDEA	Indian Self-Determination and Education Assistance Act, P.L. 93-638, as amended
ISO	International Organization for Standardization
MCL.....	maximum contaminant level
MOA Guidelines.....	Indian Health Service. Guidelines for the Utilization of the Memorandum of Agreement by the Indian Health Service Sanitation Facilities Construction Program, Working Draft. Latest copy.
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NAGPRA	Native American Graves Protection and Repatriation Act
NAHASDA	Native American Housing Assistance and Self-Determination Act of 1996 (P. L. 104-330; 25 U.S.C. 4101 et. seq.)
NEPA	National Environmental Policy Act
NHPA.....	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System

NPDWR	National Primary Drinking Water Regulations
O&M	Operation and Maintenance
OEHE	Office of Environmental Health and Engineering, IHS
OGC	Office of the General Counsel
OMB	Office of Management and Budget
OMB Circular A-87	Office of Management and Budget. "Cost Principles for State, Local and Indian Tribal Governments." Latest copy.
OMDS	Operation and Maintenance Data System
OPAC	Online Payment and Collection
OPDIVs	Operating Divisions
OPH	Office of Public Health, IHS
OSHA	Occupational Safety and Health Administration, U.S. Department of Labor
OTSG	Office of Tribal Self-Governance, IHS
P.L. 93-638	Indian Self-Determination and Education Assistance Act
P.L. 94-437	Indian Health Care Improvement Act
P.L. 100-713	Indian Health Care Amendments of 1988
P.L. 86-121	Indian Sanitation Facilities Act of 1959
P.L. 103-399	Indian Lands Open Dump Cleanup Act
PDS	Project Data System
PFA	Project Funding Agreement
PHS	Public Health Service
POR	Program of Requirements
PSFA	Programs, Services, Functions, and Activities
PWSID	EPA Public Water System identification number
RCRA	Resource Conservation and Recovery Act
RFO	Request For Opinion. An opinion by the OGC which explains the specific points of law for Federal government program officials.
ROW	right-of-way
RRM	Resources Requirement Methodology
RUS	Rural Utilities Service, USDA (one of several agencies that were formerly Farmer's Home Administration)
SD/SG	Self-Determination/Self-Governance. Refers to tribes that assume responsibility for an IHS program under P.L. 93-638 Title I (SD) or Title III (SG).
SDI	Sanitation Deficiency Inventory
SDS	Sanitation Deficiency System
SDWA	Safe Drinking Water Act
SFC	Sanitation Facilities Construction
SFCB	Sanitation Facilities Construction Branch, IHS
SFCP	Sanitation Facilities Construction Program, IHS
SGDP	Self-Governance Demonstration Project
SHPO	State Historic Preservation Officer
Single Audit Act	Single Audit Act of 1984, Pub. L. 98-502, Oct. 19, 1984, 98 Stat. 2327 (31 U.S.C. Sec. 7501 et seq.)

Subpart J.....	Code of Federal Regulations, Title 25, Chapter V, Part 900, Contracts under the Indian Self-determination And Education Assistance Act (25 CFR 900); Subpart J--Construction, Sections 900.110 to 900.148.
TAC.....	Tribal Advisory Committee
TDHE.....	Tribally Designated Housing Entity (formerly Indian Housing Authority)
TERO	Tribal Employment Rights Office
THPO	Tribal Historic Preservation Officer
U.S.	United States government; Federal government
USC.....	United States Code
USDA.....	U.S. Department of Agriculture
Yellow Book	Indian Health Service. "Guideline for the Sanitation Facilities Construction Program under the Title III Self-Governance Demonstration Project." Latest copy.

Sanitation Deficiency System (SDS)

Guide to Reporting Sanitation Deficiencies for American Indian and Alaska Native Homes and Communities

1. **Introduction**

The information on American Indian and Alaska Native community sanitation facility deficiencies is reported in the Sanitation Deficiency System (SDS). Since being introduced in 1989, the SDS has been modified, as necessary, to meet changing program and tribal requirements. This version of the manual includes all system modifications to date.

This manual contains the standard procedures for the Indian Health Service (IHS) to report the sanitation deficiencies of American Indian and Alaska Native communities. Sanitation deficiencies are the water, sewer, and solid waste facilities that existing homes need for safe water supply and sanitary waste disposal. The sanitation deficiencies are identified and entered into the SDS by each of the 12 IHS Area Offices across the nation in consultation with the respective tribes in those Areas and are reported to Congress annually as required by the Indian Health Care Improvement Act (IHCIA), Public Law 94-437, as amended (25 U.S.C. 1601 et seq). This guideline is a reference for IHS environmental health field staff who report the sanitation deficiencies, for IHS program managers who must evaluate and prioritize the deficiencies, and for Tribal leaders to identify the sanitation deficiencies in their communities that may be eligible for funding under the Public Law (P.L.) 86-121 (42 U.S.C. 2004a).

P.L. 86-121 authorizes the IHS, through the Sanitation Facilities Construction (SFC) Program, to provide essential water supply, sewage, and solid waste disposal facilities for American Indian and Alaska Native homes and communities as part of a comprehensive health care program to raise the health of the Indian people to the highest possible level. This authority was reaffirmed by Congress in the IHCIA. Under the IHCIA, Section 302 [25 U.S.C. Section 1632], the IHS is required to provide the following:

"§ 1632. Safe water and sanitary waste disposal facilities

(g) Annual report; sanitation deficiency levels

- (1) The Secretary shall submit to the President, for inclusion in each report required to be transmitted to the Congress under section 1671 of this title, a report which sets forth -
 - (A) the current Indian sanitation facility priority system of the Service;
 - (B) the methodology for determining sanitation deficiencies;
 - (C) the level of sanitation deficiency for each sanitation facilities project of each Indian tribe or community;
 - (D) the amount of funds necessary to raise all Indian tribes and communities to a level I sanitation deficiency; and
 - (E) the amount of funds necessary to raise all Indian tribes and communities to zero sanitation deficiency.

- (2) In preparing each report required under paragraph (1) (other than the initial report), the Secretary shall consult with Indian tribes and tribal organizations (including those tribes or tribal organizations operating health care programs or facilities under any contract entered into with the Service under the Indian Self-Determination Act (25 U.S.C. 450f et seq.)) to determine the sanitation needs of each tribe.
- (3) The methodology used by the Secretary in determining sanitation deficiencies for purposes of paragraph (1) shall be applied uniformly to all Indian tribes and communities."

Prior to 1989, the reporting of sanitation deficiencies as unmet needs was part of the Sanitation Facility Data System. The Sanitation Facility Data System was a database that included basic information on existing and needed sanitation facilities and information on existing Operation and Maintenance (O&M) organizations serving American Indians and Alaska Natives (AI/AN). Beginning with the 1989 reporting year, sanitation deficiencies data were separated from the Sanitation Facility Data System and entered into the Sanitation Deficiency System.

2. SDS Overview

The IHCIA requires IHS to maintain inventories of sanitation deficiencies for new and existing Indian homes and communities, to prioritize those deficiencies, and to annually report them to Congress. Since 1989, IHS has annually reported these needs to Congress in the form of needed projects. Projects are identified in terms of the facilities to be provided, the cost of those facilities, and the number of homes to be served by the facilities.

Reporting Requirements

The inventory of sanitation facilities needs for existing AI/AN homes is maintained in the SDS Community Deficiency Profiles. The data are updated annually to account for inflation, changing state and Federal regulations, to add new deficiencies, and to delete the deficiencies addressed by projects funded by IHS and others. Sanitation needs for new and like-new homes are maintained and updated annually. These sanitation deficiency inventories are primarily used for internal program management, budget formulation and justification for appropriations, and are a basis for resource allocation to Areas and tribes. Just as important, they also are used to provide a wide variety of information to members of Congress, the Office of Management and Budget (OMB), the General Accounting Office (GAO), the Environmental Protection Agency (EPA), and various other Federal entities who are interested in the needs of tribes.

These Guidelines are required to ensure uniform Area standards and procedures for identifying deficiencies, for developing projects, and for prioritizing projects. Priority shall be established in accordance with these Guidelines and will be entered into the SDS. Any deviation from these practices must be approved by the IHS Headquarters SFC Program.

All tribes, regardless of SFC Program delivery method, report their SDS needs similarly and participate equally in the allocation process. Each Area Office SDS project request must be submitted to the IHS Headquarters SFC Program by August 1 of each year. The SDS project information will be used to update the SDS priority list of projects that IHS submits to Congress.

All sanitation deficiencies with technically and environmentally feasible solutions are reported in the Total Database Estimate regardless of associated cost. Capital costs, O&M costs, and O&M capability are evaluated as part of the priority scoring process. Projects with exceptionally high capital costs and projects with low health impact are not included¹ in the current feasible project cost estimate and are not considered in determining the Area-specific distribution of available funds by IHS Headquarters. The feasible project cost estimate is established primarily for the purpose of obtaining total Agency and Area estimates to be used for budgeting and planning. The sum of the feasible costs in SDS is the basis for the IHS Funding Plan. The projects in SDS are re-evaluated annually to determine whether the rating factors have changed and whether they should be included in the IHS Funding Plan.

¹ statement from Report to Congress.

In general, only existing deficiencies which can be corrected by projects or project phases that meet the current eligibility policies of the P.L. 86-121 program are eligible for funding through SDS. Projects to serve HUD homes cannot be funded with IHS appropriations but can be listed in SDS (see section 4.g.). The HUD contributions should not be combined with and entered in the same fields as IHS contributions in SDS. The SDS program's funding data input screens have separate fields for IHS contributions, HUD contributions, and other contributions. Some non-eligible homes or businesses can be included in an SDS project that is primarily for the benefit of Indian homes, but the prorated cost to serve them must be identified in the SDS as coming from other funding sources.

Economic development projects should not be included in the SDS data, even if they involve water, sewer, or solid waste. For example, fertilizer processing from sludge or power generation from solid waste are normally not eligible projects.

3. **Definitions--Explanation of Terms Used in SDS**

- a. **Adequate, or Adequacy of water supply systems and sanitary sewage wastes systems:** Adequate sanitation facilities comply with all applicable Federal, state, and local health and environmental laws and regulations and good public health practice. Also, adequate implies that all Indian homes have piped indoor water and wastewater facilities (exceptions may include some arctic or remote locations).
- b. **Sanitation Deficiency:** An identified need for new or upgraded sanitation facilities for existing homes of American Indians or Alaska Natives. The deficiencies for homes are reported in two ways: (1) the type of deficiency (water, sewer, and solid waste and O&M) and (2) the level of deficiency (Levels 1 to 5; where Level 5 = no water and no sewer). See Table 1 in Section 6 for a more detailed list of the sanitation deficiencies as defined in the statute. The type and level of deficiency for each home in a community are reported in the Community Deficiency Profiles of SDS (see Appendix B).
- c. **Community Deficiency Profile:** This is the starting point for developing SDS projects that will raise the deficiency level of AI/AN homes to Deficiency Level 1 or DL1 (fully adequate water supply, sewage disposal, and solid waste disposal facilities). The needs or deficiencies for all AI/AN home in a community should be identified in a Community Deficiency Profile prior to developing SDS projects.

The Community Deficiency Profile data must be accurate and should account for every AI/AN home in the community, regardless of eligibility, and the total number of homes should be the same for water, sewer, and solid waste when the homes at all deficiency levels are totaled. Existing community buildings and non-residential units may be listed in the Community Deficiency Profile, if they are tribally-owned and non-commercial. The development of a Community Deficiency Profile is discussed in Section 6 and in Appendix B. As projects are funded and completed, the Community Deficiency Profile should be updated to reflect the deficiency changes resulting from those projects.

- d. **Projects to Correct Deficiencies:** The IHS is required to analyze the deficiencies and provide cost estimates to correct all deficiencies. Proposed projects must be identified to address specific deficiencies for specific homes and to correct the deficiencies in an organized, effective, and efficient manner. The information provided for each project must be sufficient to prioritize the project, quantify the deficiencies being corrected and identify the reservation, tribe, community, and homes being served.

Beginning with the data provided in the Community Deficiency Profile, each project must include cost estimates for the different types of facilities or services proposed (water, sewer, solid waste, O&M), number of homes to be provided different types of facilities or service (water, sewer, solid waste, O&M), initial and final deficiency levels, etc. The goal is to raise the existing individual and community sanitation systems to DL1 or better condition. A proposed project, by itself, need not be sufficient to raise the entire sanitation system to a DL1 condition (see Project Deficiency Levels).

Sanitation facilities for new housing generally are provided with funding from specific IHS housing appropriations and tribal funding, as well as other sources, and should not

be reported as a sanitation deficiency. However, sanitation deficiencies for housing, which was completed and for which funding was not identified or committed for sanitation facilities shall be reported in the SDS with the exception of individual facilities for HUD housing under Tribally Designated Housing Entity (TDHE) or Indian Housing Authority (IHA) management. (see section 4.g.)

Projects should be proposed only to correct identified deficiencies in the Community Deficiency Profile that can be verified in the field (See Section 4). For example, the number of existing scattered homes in need of sanitation facilities should not be guessed or grossly estimated. If an identified sanitation deficiency cannot be verified by IHS, a project to correct the deficiency should not be proposed. A "verifiability" test would be the ability to show a visiting official the reported sanitation deficiencies of a community or of scattered individual homes.

Projects to correct all sanitation deficiencies should be reported using the definitions in this section, regardless of cause, cost, priority, or lack of proper O&M. The IHCA requires IHS to consult with the affected Indian tribe (or tribal organization operating health care programs or facilities under contracts with the IHS under the Indian Self-Determination Act) to determine the sanitation deficiencies of the tribe. The methodology used to report and prioritize projects is to be applied uniformly by the IHS to all Indian tribes and communities as required by IHCA, Section 302(g).

Sanitation deficiencies and proposed projects to correct the deficiencies are based on existing conditions and existing needs. Projections of future needs should not be used to define projects or deficiencies for identification in SDS. SDS data are used to describe existing conditions and needs, not to predict future needs.

Sanitation deficiencies and proposed projects to correct the deficiencies should address current conditions. O&M problems which are expected to be of short duration should not be a basis for identifying deficiencies or proposed projects.

- e. First Service and Previously Served Homes: AI/AN homes that were never served by the IHS or funded by any other Federal agency with any sanitation facilities (water, sewer, or solid waste service) are considered first service homes. A home that was coded "first service" in the Project Data System (PDS) system for a particular service cannot be considered first service in the SDS system. Homes can only be "first service" for a particular type of sanitation facility service once. If a home was previously served with water and sewer facilities by IHS or with funds from any other Federal agency, but not with solid waste facilities, the home would be "first service" for solid waste and "previously served" for water and sewer.
- f. Individual and Community Facilities: Individual facility and community facility refer to the types of water or sewer service connection that are provided to a house, not the location of the facilities to be installed. Individual facilities serve a single home and include individual septic tanks and drainfields, individual wells, etc. Homes that will be provided service connections to a new or existing community water system are considered to be receiving community services for water.

Homes to be served by a project that includes a water main to provide service connections to homes and individual septic tanks and drainfields for each of those homes for wastewater disposal are considered as receiving community service for the water and individual service for the sewer.

- New solid waste facilities or improvements to solid waste facilities are considered to be community facilities.
- g. Routine maintenance: Routine maintenance includes all scheduled maintenance and short-term equipment replacements (such as pump replacements), control component replacements, tank painting, septic tank pumping, filter sand replacement, etc. Deteriorating facilities correctable by routine maintenance are DL1.
- h. Average unit cost. The average unit cost is the sum of the average cost to provide water service, the average cost to provide sewer service, and the average cost to provide solid waste service to an eligible AI/AN home in an Area. An Area determines the average unit cost to provide sanitation facilities by reviewing previous projects and applying other factors including inflation, climate, logistics, etc. Within an Area, the average unit cost could be regional in nature similar to Alaska which has three *allowable* unit costs. Each IHS Area makes relative determinations of unit costs that includes parameters unique to that Area and that can be supported.
- i. Allowable unit cost. The IHS developed total allowable unit costs for each state to determine project feasibility, except for Alaska which has three total allowable unit costs. The total allowable unit cost is the maximum unit cost (including the costs incurred by IHS, by all other funding sources, and for all phases) for providing sanitation facilities for a home without sanitation facilities. The current values of each state's total allowable unit cost is listed in Appendix A, Table A-2.

4. **Sanitation Deficiency Reporting Policies**

Tribal Consultation

Only sanitation facility projects eligible under the authority of P.L. 86-121 may be listed in the SDS inventory (see also g.); therefore, this constraint is a deciding factor in the scope of the deficiencies and selection of the proposed projects. The IHCI requires that the IHS consult with a tribe prior to reporting sanitation deficiencies for that tribe. Tribal consultation is required to both identify all eligible needs and obtain tribal priority scores. Collective tribal consultation (i.e., through your Tribal Advisory Committees) is strongly recommended to determine how the "local conditions" and "tribal contributions" factors (see section on Evaluating Deficiencies) should be uniformly applied across the Area. Each Area should be providing training to tribes and/or holding meetings annually to review SDS policies, criteria, and procedures.

A tribe may want to include economic development needs along with the existing domestic sanitation deficiencies. IHS can only address the sanitation deficiencies of existing AI/AN homes within the scope of the definitions described in this guideline. IHS can serve incidental tribal buildings, such as a tribal office building, in conjunction with nearby homes, but cannot serve major tribal businesses such as a bingo establishments, travel centers, etc. Conflict can also occur between IHS and a Tribe over the scope of a particular sanitation deficiency and the proposed solution to be reported. For example, a tribe may want water pumped into a community from a distant water source, while the IHS determined that the cost of using that proposed source exceeds the Area's allowable cost per housing unit and alternately propose that a more feasible solution is a well near the community. Every effort should be made to resolve the differences at the Area level.

The final decision on the level of sanitation deficiencies for each proposed project is made by IHS. Once a project is funded by IHS, a decision by IHS to proceed with a particular alternative must have the support of the tribal community, so that the facilities proposed will be operated and maintained properly to maximize the health benefit. At that time, the Tribe may contribute or seek other funding sources to pay the additional cost for the tribally desired higher cost alternative or to supplement IHS funds for a project which also addresses Tribal economic development plans or commercial deficiencies.

Reportable Deficiencies

- a. **Sanitation Facilities Construction (SFC) Program Criteria:** Only existing deficiencies which can be corrected by projects or project phases that meet the current eligibility policies of the P.L. 86-121 program are eligible for funding through SDS. [see g., for a discussion on including projects ineligible for IHS SFC funding.] A detailed discussion on eligibility is in the "Criteria for the Sanitation Facilities Construction Program" (Criteria document). P.L. 86-121 projects provide essential domestic water supply and waste disposal facilities for Indian owned and occupied homes. Economic development needs, even if they involve water, sewer, or solid waste sanitation facilities, should not be reported in SDS. For example, fertilizer processing from sludge or power generation from solid waste are normally not eligible projects.

- b. Geographical boundaries (service area): The SFC program can provide sanitation facilities to eligible persons on or near Indian reservations, but only in counties labeled IHS Contract Health Services Delivery Area (CHSDA). See the Criteria document for more information.
- c. Reporting of Individual System Deficiencies: Individual (non-community) sanitation facilities have some unique aspects that need clarification. Additional guidance for individual water, sewer, and solid waste systems are as follows:
 - i. The need for only household solid waste storage containers is not to be counted as a sanitation deficiency, and the past provision of only household containers is not to be considered a previous service.
 - ii. A project to remedy septic tank and drainfield systems that have failed because of the lack of maintenance may have a lower priority than a project to serve homes without septic tank and drainfield systems within the same community. However, potential adverse health impact resulting from failed drainfields, should not be ignored. IHS Field, District, Area, and Headquarters staff should discuss these situations with the Tribes and provide assistance in identifying resources to address these problems.
 - iii. Deficiencies for individual sanitation facilities serving HUD housing units that are still under housing authority or TDHE management are the responsibility of HUD through the TDHE. Those deficiencies are not eligible for funding under the P.L. 86-121 SFC Program and should be referred to the TDHE for inclusion in their annual budget. (See g., for additional information on HUD housing.)
- d. Reporting Homes Without Potable Water: The number of AI/AN occupied homes without potable water piped into the homes is to be entered in the appropriately labeled field on the Community Deficiency Profile form for the geographical area where the homes are located. The purpose of the homes-without-potable-water field is to obtain an accurate Area and nation-wide total of all AI/AN homes without piped potable water.

Homes-without-potable-water include those without piped water in the home (water is hauled) or those with piped but not-potable water in the home. This number also includes homes served by existing individual water systems with non-potable water.

If the source of water is a community water system (EPA definition: 15 connections/ 25 individuals/ 60 days per year), potable means meeting EPA primary drinking water standards for community water systems (excluding monitoring requirements and secondary standards). New drinking water regulations are promulgated by EPA almost yearly, and many of those regulations cover non-community water systems. Since several regulatory definitions for non-community water systems exist, the Area should contact the EPA Regional Office to determine what drinking water requirements the proposed sanitation facilities must meet.

Procedures used to identify homes without potable water are similar to those used for identifying and estimating other types of sanitation deficiencies and the same level of

accuracy is expected. Determination of maximum contaminant levels (MCLs) for individual systems may be difficult and costly. Professional judgment citing evidence such as turbid water, salty taste, odors, unsanitary well seal may be the only practical means of making a determination that the water is not potable. Additional detailed guidance is provided in Appendix B (Community Deficiency Profiles).

- e. Reporting Solid Waste Deficiencies: AI/AN homes with solid waste facility deficiencies may result from:
 - i. deficiencies in solid waste collection equipment,
 - ii. deficiencies in currently used tribally owned solid waste disposal sites, and
 - iii. deficiencies at previously used tribally owned disposal sites.

The AI/AN homes counted as having deficiencies related to solid waste disposal sites must be those homes which are currently using the site or have previously used the site. Allowable IHS costs included in the project to correct deficiencies at solid waste disposal sites should be limited to an appropriate share of the cost when solid waste from sources other than AI/AN homes is being or has been disposed of at the site.

Solid waste projects should be phased and prioritized such that the solid waste management plan precedes projects for solid waste disposal alternatives including landfills that meet EPA regulations and transfer stations. Similarly, the project to construct the solid waste disposal alternative should precede the closure of open dumps or the old landfill. Solid waste projects that are phased should be prioritized in this order-- 1) management plan, 2) alternative disposal, 3) closure of open dump or old landfill.

- All identified solid waste deficiencies for community housing areas should be reported; however, if a waste disposal facility that complies with EPA regulations is available to the homes in the community, those homes are considered as DL0 or DL1 for solid waste, even if the homeowners in the community choose not to use the facility.
- Report remote isolated homes as needing solid waste facilities if they are included in an approved solid waste plan supported by the appropriate tribal governing body.
 - If there is no approved plan, report the homes if unsanitary dumping (open dump) attributable to the remote isolated homes was documented by IHS.
 - Those remote homes should be counted as having deficiencies; however, proposed projects to correct those deficiencies should not include removing trash from each home site to the proposed facility. An alternative may include transfer stations.
- If the Tribe has not approved a solid waste management plan and unsanitary dumping is not happening, then do not report a solid waste project or deficiencies for the remote isolated homes.

Proposed solutions to solid waste deficiencies should be evaluated closely for high O&M cost and O&M organization capability for each community. The DL1 solid waste disposal project should meet location and site development requirements of all Federal, state, and local laws and regulations. The best solid waste disposal solution

may vary for each community and reservation. Alternatives such as using off-reservation disposal locations and private hauling contractors should be considered.

Although issues such as the disposal of hazardous wastes on a reservation are a concern of the IHS and should be identified and evaluated, usually they are not within the scope or the capabilities of the SFC program. The IHS will provide technical assistance to Tribes but suggests that Tribes contact the EPA to address their hazardous waste issues.

Hauling trash off the reservation to a disposal site that complies with EPA's municipal solid waste landfill regulations is the best long-term solution for most small reservations from the health, economic, and environmental perspectives. With regard to trash collection, individuals should not have to drive an excessive distance (as determined by each Area) to a sanitary landfill or they will not use it. A collection/hauling service or the use of transfer stations may be a more suitable solution.

The following criteria will be used for developing SDS cost estimates for solid waste sites:

- i. Each open dump site identified in the Operation and Maintenance Data System (OMDS) must have an associated SDS project. Multiple open dump sites can be addressed by one SDS project.
- ii. Every SDS solid waste project must include three distinct capital cost estimates, one for each of the following:
 - (1) Solid waste management plan,
 - (2) An alternative for future solid waste disposal, and
 - (3) Proper disposal of the existing solid waste at the site, which may include modification or closure of the site.
- iii. Enter the capital cost estimates in the appropriate fields in the SDS:
 - A-- solid waste management plans,
 - B--closure cost, and
 - C--alternative disposal method or facility.

If the cost is zero dollars for any of the three required cost estimates, the reason should be noted in the comments field; e.g., the Tribe adopted a solid waste management plan in 1999.

Use the most likely alternative for future solid waste disposal. If the alternative is to haul all solid waste off the reservation, note that alternative in the SDS narrative, even if there are no associated capital costs. Tribal consultation is required when establishing the most likely solid waste alternatives and developing cost estimates.

Only currently eligible costs are to be considered in the SDS project. Do not include the O&M costs (e.g., the cost of hauling solid waste off reservation) or the cost of post-closure maintenance in the SDS estimate. Post-closure costs should be developed separately and noted in the narrative fields, if available.

Use the design criteria in the current EPA municipal solid waste landfill regulations (40 CFR Part 258) when developing cost estimates for new solid waste facilities.

All SDS criteria will apply, including economic feasibility and other scoring criteria. Develop unit costs in a similar manner as water and sewer unit costs, and count only homes that use the site or previously used the site.

Unless the Area knows or strongly suspects that a site contains hazardous wastes, do not consider the waste to require special disposal/processing techniques. Although demolition wastes are considered to be industrial wastes by EPA, open dumps which include waste from such places as demolished houses and tribal buildings can be considered for an SDS project. Other types of industrial wastes (e.g., disposal of waste from a lumber or farming operations) may not be included for closure in an SDS project.

- f. Non-Indian Communities: The Criteria document includes provisions for providing assistance to non-Indian communities (less than 50 percent of the population is AI/AN) of less than 10,000 people. Usually, these undertakings are a result of funding contributions towards community projects that are not managed by IHS; hence, they are not typical IHS projects. The IHS funding amount that is entered in SDS is only that portion of the project cost associated with improved services to AI/AN people. Only the IHS eligible homes and IHS funding will be considered and included in reports to Congress.

The IHS funding amount entered into SDS should be calculated based on the project cost, less the prorated costs for all the commercial, industrial, governmental, and institutional establishments benefiting from the proposed facilities, and less the prorated costs for all services to the non-Indian homes benefiting from the proposed facilities. The IHS costs would not be determined based on a straight Indian/Non-Indian population ratio. Use the appropriate funding field to explain the source of the contribution and to note any additional information.

Most projects for non-Indian communities should be DL2 projects, since they are to make capital improvements; e.g., add a water tank:

- i. All projects must have tribal scores from the appropriate tribe.
- ii. Each SDS project and the Community Deficiency Profile should include:
 - (1) The Indian and non-Indian population,
 - (2) The number of Indian and non-Indian homes, and
 - (3) The number of commercial and institutional users.
- iii. The Headquarters SFC Program will carefully review each of these project submissions.
- iv. Projects in non-Indian communities that are classified by a Tribe or Area to be DL3 projects must have significant justification/documentation; otherwise they will be reclassified as DL 1 or DL2 projects. Please brief the tribes of these conditions.

These criteria should be strictly applied when identifying deficiencies associated with regional utility systems. The expansion and/or extensions of a utility system to serve Indian homes that were not previously served is considered as providing service to the Indian community/homes. However, the upgrade of existing non-Indian systems, which serve Indian-owned homes, must meet the eligibility requirements in the Criteria document. In all cases, the project cost estimate to correct deficiencies should not

exceed the pro-rata share of the Indian owned and occupied homes being served. Refer to the Criteria document for additional guidance and contact Headquarters if there are any questions concerning interpretation of the criteria. Specific guidance on entering data for homes served by non-Indian utility systems on the Community Deficiency Profile forms is included in Appendix B.

- g. Projects Ineligible for IHS SFC Funding: HUD, EPA, and other entities may fund projects which are not eligible for IHS funding; e.g., projects that serve HUD homes and projects funded by EPA Safe Drinking Water Act Indian Set-Aside grants that serve IHS ineligible homes. SDS can now accommodate non-IHS funded projects and projects to serve exclusively HUD homes with either individual systems or community systems (where HUD houses created the deficiency).
- (1) Enter the funding amounts and select the funding source; HUD, EPA, RUS, etc. Provide comments as appropriate for each type of project contribution.
 - (2) To avoid the perception that the entire project is ineligible for IHS funds, the HUD and other agency funded projects should be entered in SDS as stand-alone projects; i.e., as SDS projects that serve only HUD homes.
 - (3) These projects are scored like any other SDS project; however, if they end up in the funding range, IHS funds cannot be used for the project. The projects may not be funded (i.e., they will be skipped) if there are insufficient EPA, HUD, or other funds.
 - (4) When an SDS project is identified to correct deficiencies in sanitation facilities serving TDHE-managed HUD homes, the following should be considered to determine if the TDHE should contribute toward the project:
 - (A) If the HUD homes that will benefit from the project are under TDHE management and these homes clearly created or contributed to the sanitation deficiency when they were built, then the TDHE is responsible for a pro-rata portion of the cost of any new or improved sanitation facilities serving those homes.
 - (B) If the TDHE originally contributed toward the construction of adequate sanitation facilities and the deficiency is due to the addition of non-HUD homes to the system, the TDHE will not be required to make a contribution to the SDS project.
 - (C) *If the HUD units did not cause the deficiency, code the units as "IHS eligible" in the Community Deficiency Profile and enter them into the project Housing group as H1 type units. Note in the Comments of both the Community Deficiency Profile entry and the Housing entry why those units are IHS eligible.*
 - (D) If it is determined that the TDHE should contribute a share of an SDS project, the deficiencies (cost and number of houses) must be prorated between IHS and the TDHE on the SDS data entry form. The SDS score for Contributions should be adjusted to reflect the likelihood of the TDHE contributions being received.
- h. Compliance with Environmental Regulations: Deficiencies should be identified and projects proposed to comply with existing regulations; proposed regulations should not be considered for this purpose. Some final regulations allow a period of time for achieving compliance. Deficiencies identified and proposed projects to correct the deficiencies included in SDS should be based on the date of publication of the regulations, not on the required compliance date. For example, if a regulation published

June 1, 1999 requires compliance by June 1, 2001, then SDS updates after June 1, 1999 should include funding to meet the June 1, 2001 requirements.

5. **Identifying Sanitation Deficiencies**

Sanitation deficiencies must be identified, and the identification of sanitation deficiencies can be made several ways, the most common of which follow:

- Consultation with tribal members and other agencies
- Field visits by engineers, sanitarians, CHR's, nurses, or by other IHS or tribal health staff
- Sanitary Surveys
- Community Environmental Health Profiles
- Bureau of Indian Affairs (BIA) Inventory
- Census Bureau Reports (for comparison purposes only)
- Tribal Master Plans for development
- Telephone Surveys
- Feasibility Studies

The most reliable and preferred method is a field visit to each community to identify and obtain accurate numbers of homes with sanitation deficiencies. The numbers of Indian homes within the communities must be consistent among the various methods cited above. For example, the number of AI/AN homes reported with sanitation deficiencies in a particular county should be less than or equal to the number of Indian homes in the census data or IHS patient registration data for that county.

If a field visit cannot be made, it is highly recommended that more than one method be used to determine sanitation deficiencies to increase the accuracy and establish greater credibility for the data. The identification methods used for each proposed project must be retained and documented in area records. During any given field visit, IHS or tribal staff should be documenting observed and tribally reported sanitation deficiencies. The SDS data should be updated accordingly after the visit.

- a. **Feasibility Policy:** Projects should be proposed to correct all sanitation deficiencies with technically and environmentally feasible solutions regardless of the associated cost. Capital costs, O&M costs, and O&M organization capability are evaluated as a part of the priority scoring process described in Section 8. The proposed project to resolve the identified deficiency should consist of the most appropriate technology for the given conditions; e.g., a lagoon for the treatment and disposal of sewage in a remote dry-climate location is more appropriate than a mechanical package sewage treatment plant. Providing piped water/sewer into each home in some arctic and remote desert locations may not be feasible; note the conditions on the narrative form of the SDS project.

In some cases, the economic feasibility of projects should be reviewed based on all phases of the project. There may be a need to provide a more detailed review of economic feasibility of projects which address more than one deficiency. For example, a SDS project which includes DL4 water deficiencies for 20 homes for \$500,000 and DL2 water deficiencies for 200 homes for \$50,000 is infeasible because the DL4 portion of the project is infeasible.

- b. Capital Cost Policy: Only alternatives that are the most cost-effective, including life-cycle costs, should be selected by the Area. Technologies that reduce operation and maintenance costs for little additional capital cost may be appropriate. Projects with excessive capital costs will not be included in IHS funding plans. Guidance for determining economic feasibility will be modified periodically by IHS Headquarters. Current guidance is included as Appendix A.

Normally, the Headquarters SFC Program will review the economic feasibility determinations of the top 20-25 percent of the projects on an Area's SDS priority list and may exclude additional projects from the IHS funding plans. Specific projects which do not satisfy IHS criteria for economic feasibility may be included in Agency funding plans if justified by the Area and approved by Headquarters. Capital costs are further explained in the section on evaluating deficiencies in Section 8.

Feasibility in SDS is determined by either the initial deficiency level, the project unit cost versus allowable unit cost, the capital cost score, or a combination of the three items. Projects with exceptionally high capital costs and projects with low health impact are not included in the current feasible project cost estimate and are not considered in determining the Area-specific distribution of available funds by IHS Headquarters.

- c. Operation and Maintenance (O&M) Cost Policy: The determination of the O&M costs for a proposed facility involves consideration of many variables. Many water, sewer, and solid waste system operating costs are either partially or entirely tribally subsidized. Household incomes and O&M operating costs vary with community and sanitation facility.

A proposed sanitation facility by itself may have a comparably high O&M cost, or when considered with the cost of O&M of the existing system, the total O&M cost may be higher than the community can sustain. Since O&M costs vary with local conditions, setting a national or Area-wide upper dollar limit to identify high O&M cost projects is extremely difficult. Each proposed project O&M cost should be evaluated and sanitation technologies should be used that minimize O&M costs. The deficiency evaluation process discussed in these guidelines includes an O&M organization capability parameter to allow for consideration of O&M cost affordability.

- d. O&M Organization Capability Policy: The IHS seeks to ensure that the sanitation facilities it constructs or funds will receive sufficient O&M, so that the resulting public health benefits for the people continue long after the facilities are completed. For all IHS constructed or funded sanitation facilities, a tribe or other responsible entity must agree to assume O&M responsibility. The previous and current ability and interest of a tribe (or others) to effectively operate and maintain proposed sanitation facilities must be evaluated. A past history of allowing facilities to deteriorate, fail, or go unrepaired because of the lack of O&M, or a lack of financial and technical capability to operate and maintain the system, cannot be reasons to exclude tribes from the provision of facilities (see 25 U.S.C. 1632). O&M capability is considered in the priority scoring process. More specific O&M performance criteria to determine the adequacy of O&M include the following:

- (1) IHS has documented efforts to assist a tribe or other entity with O&M training over a period of years, and the tribe has or has not established a viable O&M organization supported by the tribal government.
- (2) One or more sanitation facilities in the past reporting year have failed from the lack of O&M resulting in a health hazard and have or have not been repaired. Preventive maintenance is or is not performed regularly. Sanitary survey deficiencies are or are not corrected in a timely manner.
- (3) During the last year, the tribe has or has not made an adequate attempt to enforce or collect user fees or provide adequate tribal resources to fund the O&M organization properly in the absence of adequate user fees. The tribe has or has not created a reserve account for emergencies and equipment replacement.

6. Deficiency Level Assignment

The level of sanitation deficiency for each sanitation facilities project of each Indian tribe or community must be determined to satisfy the IHCA. However, assigning one deficiency level to a tribe, reservation, county, or community does not adequately define the condition of sanitation facilities for monitoring, reporting, or prioritizing needs. Comparison of data on project deficiency levels between Areas or consolidation of data at Headquarters for reports to Congress would not be possible without uniform guidance. To satisfy those requirements and the law, this document provides the guidance to identify the number of homes at each deficiency level by community and by type of home, and provides the guidance to assign deficiency levels of each proposed project. More detailed information necessary for coding and reporting purposes is included in Appendix E. Table 1 shows the deficiency levels.

Sanitation Deficiency Level		Table 1. Sanitation Deficiency Levels [25 U.S.C. Sec. 1632(g)(4)]	
		Description	Example
V	5	An Indian tribe or community that lacks a safe water supply <u>and</u> a sewage disposal system. [Highest priority]	A community or individual home that lacks both a safe water supply and a safe sewage disposal system.
IV	4	An Indian tribe or community with a sanitation system which lacks <u>either</u> a safe water supply system or a sewage disposal system.	A safe community water supply system exists but a safe sewage disposal system (community or individual) does not. A safe community sewage system exists but a safe water supply system (community or individual) does not.
III	3	An Indian tribe or community with a sanitation system which has an inadequate or partial water supply and a sewage disposal facility that does not comply with applicable water supply and pollution control laws, <u>or</u> has no solid waste disposal facility.	Safe water supply and sewage disposal facilities exist, but there are significant problems with water quantity or the sewage lagoon is overloaded and overflowing and the effluent does not meet permit discharge standards, or there are no solid waste disposal facilities.
II	2	An Indian tribe or community with a sanitation system which complies with all applicable water supply and pollution control laws, and in which the deficiencies relate to capital improvements that are necessary to improve the facilities in order to meet the needs of such tribe or community for domestic sanitation facilities.	Water supply, sewage disposal and solid waste disposal facilities exist, but the water storage tank is too small, or the water well capacity is not adequate, or some of the pipelines are not large enough.
I	1	An Indian tribe or community with a sanitation system which complies with all applicable water supply and pollution control laws, and in which the deficiencies relate to routine replacement, repair, or maintenance needs. A minimum level of technical assistance is required from the IHS. <u>Note:</u> Level 1 deficiencies are the responsibility of the respective tribe or others. Level 1 deficiencies will have lower priority ranking and will not be on the list requesting funding but will be reported to Congress as a deficiency.	Fully adequate water supply, sewage disposal and solid waste disposal facilities exist. Typical deficiencies will include worn out pumps, a water storage tank in need of paint, broken water mains, etc.
0	0	No deficiencies to correct.	Projects that do not correct deficiencies.

Deficiency levels and types of service are based on deficiencies eligible for correction under P.L. 86-121. Specific examples are included in Appendix B. Do not assign deficiency levels in SDS projects based on homes that are next to the project homes. For example, if a proposed project site is a cluster of 20 homes and 10 of those homes have failing drainfields, those 10 homes with failing drainfields are DL4 for sewer, and the other 10 homes are DL0 or DL1. A proposed SDS project to provide community sewer to those homes is coded as an initial level DL4 project serving 10 homes, not 20 homes.

- a. Community Deficiency Profiles: The geographical area historically served by the IHS Area is divided into "communities". An eligible American Indian or Alaska Native home can only be located in one community, and the data for that home can only be listed on one Community Deficiency Profile. The data required for each home includes the deficiency level (DL1 through DL5) and the type or types of assistance required for each home (water, sewer, solid waste facilities or improvements).

Community Deficiency Profiles are required in order to estimate the number of homes with sanitation facilities at DL1 through DL5, and the number of homes with each type of sanitation deficiency (water, sewer, or solid waste). Using the Community Deficiency Profiles, those homes and their associated deficiency level information can be determined by community, reservation, state, Area, or nationally. The Community Deficiency Profiles are the best measure of the condition of sanitation facilities serving Indian homes and communities and are used to monitor and evaluate the progress in eliminating and correcting deficiencies. In addition, the data in the Community Deficiency Profiles provide the most reliable estimate of the number of homes eligible for assistance through the sanitation facilities construction program.

- (1) The Community Deficiency Profile is the beginning point in SDS. After a deficiency is identified in the Community Deficiency Profile, a project should be developed to correct that deficiency.
 - (A) Every community in the SDS has a Community Deficiency Profile.
 - (B) Every SDS project in the SDS inventory is linked to a Community Deficiency Profile.
- (2) The Community Deficiency Profile information is entered into the form at the Community Deficiency Profile tab. The Community Deficiency Profile portion of SDS is semi-independent of the other forms/tabs shown in the SDS program.

A Community Deficiency Profile can be in SDS with no associated projects, because all deficiencies are DL1 or DL0 or because the homes with deficiencies are ineligible for service by IHS (e.g., HUD homes). The reverse should not be the case; i.e., all SDS projects should have an associated Community Deficiency Profile.

- (3) Funded SDS projects are removed from the SDS inventory and priority list, but the Community Deficiency Profile that was affected by that SDS project will remain in SDS.

- (4) When a SDS project is funded, the Community Deficiency Profile should be updated to reflect the improvements in deficiency levels for the homes that were served by the project; i.e., change the initial deficiency level (IDL) on the Community Deficiency Profile to the project's final deficiency level (FDL) which should be DL1.

The profile data must be accurate and should account for every occupied AI/AN home in the community, and the total number of homes should be the same for water, sewer, and solid waste when the homes at all deficiency levels are totaled. The SFC Program and the IHS use the Community Deficiency Profile data for many purposes, including reports to Congress and the allocation formula for distribution regular funds to the Areas.

Data for the Community Deficiency Profiles consist of:

- (1) An estimate of the number of AI/AN homes within the geographical area covered by the community at each deficiency level,
- (2) An estimate of the number of AI/AN homes requiring the different types of service at each deficiency level, and
- (3) An estimate of the number of AI/AN homes without potable water.
- (4) Existing community buildings and non-residential units may be listed in the Community Deficiency Profile, if they are tribally-owned and non-commercial.
- (5) Data for specific individual homes are not collected or reported.

More specific instructions on completing the Community Deficiency Profiles is included in Appendix B.

Non-Indian Communities. Generally, sanitation deficiency information for AI/AN owned homes located in non-Indian communities should not be included on Community Deficiency Profiles. Data for homes which meet one or more of the following criteria should be included:

- The home has either individual water supply or wastewater disposal facilities.
 - The home has received service from IHS under a P.L. 86-121 project.
 - The home is a rural home included in a proposed SDS regional solid waste management project, and the home does not currently have access to a solid waste facility; e.g., transfer station, municipal solid waste landfill, or solid waste disposal service.
 - The home is served by a utility (water, sewer or solid waste) where over 50 percent of the customers are Indian owned and occupied homes.
- b. Project Deficiency Levels: The IHCIA requires a listing of the proposed projects necessary to raise sanitation deficiency levels to DL1 or better. The level of deficiencies being corrected by each proposed project must be identified.

For every community, projects shall be developed that ensure that all homes will be raised to DL1 or better and be served with piped water and sewer. If resultant projects (with piped water and sewer) are economically infeasible, the Area should also, if possible, develop an alternative economically feasible project of reduced scope that

would provide a minimal level of safe water supply and/or waste disposal service (not necessarily piped water and sewer).

- For example, a project to provide piped water and sewer for 20 homes may not be economically feasible. As an alternative, a watering point and water hauling system and septic tank systems at each home may be economically feasible. Both projects should be entered into the data system. The project which is not economically feasible should be coded as a phase 2 project and given a negative 20 (-20) capital cost score.

Initial and final deficiency levels are assigned to each proposed project, which describe the perceived condition of the home or community facilities before and after the proposed project construction. The initial and final deficiency levels are based on the deficiencies to be corrected by the proposed project. A proposed project should be logically planned from a technical and cost-effectiveness viewpoint and not necessarily configured to stay within a particular deficiency level definition or within a specific community. Where practical and feasible, projects should be phased to facilitate data utilization, prioritization, determinations of economic feasibility, and fund distribution. Projects or project phases which address one initial deficiency level and one type of service are preferred; e.g., several community homes have DL4 water deficiencies and the project will raise the deficiency level to DL1 or DL0.

In general, most solid waste projects should be placed in separate phases. If water and sewer facilities proposed in a single project are not going to serve the same homes, the facilities also could be grouped into separate phases or projects.

- Note: In a community with a municipal solid waste landfill that complies with EPA regulations, the homes are considered as DL0 or DL1 for solid waste, even if the homeowners in that community choose not to use the facility.

The **initial deficiency level** which most closely fits most of the existing deficiencies to be remedied by the proposed project (measured by cost) is to be assigned to the project. A project may include water, sewer, and solid waste facilities and different levels of deficiencies for these facilities, but the estimated costs to address the assigned initial deficiency must comprise the largest share of the project cost. For example, a project may be proposed to provide community sewer to homes presently served by septic tank systems. If more than 50 percent of the homes have failed drainfields and are DL4, the initial deficiency level should be DL4; however; if only 20 percent of the homes are DL4 and the remainder are DL2 the initial deficiency level should be DL2.

The **final deficiency level** will also be assigned based on the deficiencies addressed by the project. For example, water and sewer projects can have an initial DL5 (i.e., DL4 water and DL4 sewer) and a final DL1, regardless of any solid waste or other deficiencies which remain for the homes served. Appendix C contains detailed information on coding and assigning project deficiency levels.

7. **SDS Funding**

- a. **Design and Cost Estimation of Needed Sanitation Facilities:** Sanitation deficiency project cost estimates should be as accurate and complete as possible. The top 20 percent of SDS proposed projects (based on dollar amount) is the "Priority Listing" and should be accurate to within plus or minus 10 percent in both cost estimates and design parameters (lagoon sizing, pipe line lengths, etc.). The same accepted engineering design and cost estimation policies and procedures derived for the construction of previously funded projects should be used for estimating the cost of the Priority Listing projects to the extent that available resources permit. Cost estimates for the remaining SDS projects should be accurate to within plus or minus 25 percent. The cost estimate worksheets for the Priority Listing projects should be retained in the Area Office. Sufficient documentation should be maintained at the field station to assure continuity from one engineer to another and should be readily available to the Area Office for verification of the data in SDS.

The funds to provide sanitation facilities for new homes planned by other Federal agencies are normally provided by the agency funding those homes. However, some proposed projects should provide for the sanitation needs of planned new homes along with existing homes when sizing facilities such as water and sewer mains. Other proposed projects could be designed with flexibility to serve only existing housing now, and include features that allow sanitation facilities additions for the planned future housing when they are constructed; e.g., allotment of sufficient land for adding another cell to a sewage lagoon. That determination should be made by each Area based on experience and sound engineering judgment. However, since unit costs are determined using only the existing homes, projects designed with excessive capacity may not meet the economic feasibility criteria.

- b. **Service Delivery Option:** The SDS allows input of codes to indicate whether a project will most likely be constructed via a Title I contract, Title V compact, or IHS direct service. This information is needed for planning/tracking purposes and to be consistent with our efforts to develop "fair and reasonable" costs. This code is entered in the appropriate data field in SDS.
 - Note: Adjust the cost of the projects according to the service delivery method anticipated.
- c. **Distribution of IHS Funds:** After Congress appropriates funds to IHS for sanitation facilities projects which will address the sanitation deficiencies of existing homes, the distribution of those appropriated funds among IHS Areas is determined by IHS HQ utilizing SDS and other information including the HQ Finance system. The major considerations in determining the fund distribution include:
 - (1) The deficiency levels of the existing sanitation facilities in an Area, and
 - (2) The estimated costs to correct those deficiencies.

The distribution method is applied consistently to all Areas; however, some minor adjustments are made to ensure adequate funds for completion of construction of all funded projects and equitability between tribes and Areas. That requirement to fully

fund a project or project phase is the reason SDS project costs must be as precise as possible.

- d. Non-IHS Contributions: If a project will be partially funded by a source other than IHS, enter the amount of non-IHS contribution in the funding data fields for the appropriate project or project phase, select the source of the contribution, and note the fiscal year of the contribution. Use the contribution's comment field on that form to provide any additional information. Note that all IHS projects must serve primarily Indian homes. Non-IHS eligible portions of any SDS project should be funded from the contributions and noted in the contribution's comment field. The non-IHS eligible portion of the project should have no effect on the deficiency level and SDS project score.

Other agencies fund sanitation facility construction projects on Indian reservations through various legislative authorities and often work with the IHS in achieving their goals. One program that provides a substantial amount of funding for sanitation facilities serving existing homes is HUD's Community Development Block Grant (CDBG) Program; as the name implies, the funding is in the form of grants to the tribes. The tribe applying for the grant must compete with other tribes for the funding.

The U.S. Department of Agriculture's (USDA), Rural Utilities Service (RUS) provides low interest loans and some grants to tribal governments for sanitation facility projects. The U.S. Department of Commerce's, Economic Development Agency (EDA) has also provided grants to Indian tribes in the past for sanitation facility projects.

Tribes also have obtained funding from other sources including tribal resources and business enterprises, states, the Environmental Protection Agency (EPA), and private lending institutions. Those and other sources of funding should be considered, along with the IHS funding, for addressing the sanitation deficiencies of existing Indian homes and communities.

8. **SDS Project Development**

- a. **Narratives:** Existing project sanitation deficiencies information from the Community Deficiency Profile and the proposed facilities to remedy the deficiencies are input on different SDS project input screens. Data input fields are provided for funding, homes served, narratives for existing and proposed sanitation facilities, and additional project related comments.

If a home was provided "first service" by a project in the PDS database or marked "first service" in a proposed project in SDS, it cannot be considered as first service in another proposed project in the SDS system.

A concise and detailed description of the existing and proposed facilities should be entered. The existing facilities fields on the Narrative form should justify the initial deficiency level assigned to the project. A reviewer should be able to determine if the initial deficiency level assigned is correct by reading the information entered in this field (see Table 1 and Appendix E). The narrative field should identify the magnitude of the public health problem and its cause. In addition, the information should be specific, particularly for higher deficiency level (DL4 and DL5) projects. The use of such terms as high, low, inadequate, old, etc., should be minimized.

As examples:

- "nitrate levels exceed MCL of 10 mg/l N" should be used rather than "high nitrate levels."
- "10 wells with yields of less than 1/2 gpm" should be used rather than "inadequate low yield wells"
- "12 septic systems with continually surfacing drainfield effluent" should be used rather than " inadequate septic systems"
- "daily water pressure of approximately 10 psi measured at 10 homes during peak demand periods" should be used rather than "low pressure in the water system"

Descriptive information entered in the proposed facilities narrative field should describe the facilities to be provided to remedy the described deficiencies and justify the final project deficiency level. Additional guidance on coding is included in Appendix D.

The reliability and source of the data are extremely important; therefore, the person that updates the data must document which of the method(s) listed in the Identifying Sanitation Deficiencies section (Section 5) were used to obtain the narrative data. This documentation must be available in the IHS Area for each project. Each IHS Area office is to keep a permanent record of each year-end sanitation deficiencies report for their Area.

- b. Evaluating Deficiencies: The needs or deficiencies for all AI/AN home in a community are recorded in Community Deficiency Profiles. Each Area will evaluate the deficiencies for AI/AN homes and communities that are documented in the Community Deficiency Profiles and create projects to remedy those deficiencies. The deficiency evaluations of each SDS project are only relevant within each respective Area.

The deficiency evaluation methodology is based on eight (8) factors: health impact, existing deficiency level, previous service, capital cost, local tribal priority, O&M capability, contributions, and local conditions. The National guidelines for evaluating the factors are described below (1 through 8), and additional evaluation factors may be developed as appropriate.

- Each proposed SDS project must be prioritized using these factors.
- Evaluate each project phase separately.
- Each Area shall use the SDS project evaluation methodology consistently and equitably to arrive at the best dispersion of evaluation scores; if all projects are rated with high scores, the reasons for evaluating deficiencies to prioritize projects are diminished.
- The major objective of the system is for Areas to use these factors and point ranges outlined below to uniformly evaluate proposed sanitation facilities projects within the Area.

(1) Health Impact: (0 to 30 points)

This factor represents the reporting of a disease or other adverse human health effect directly attributable to water, sewer, or solid waste. A health hazard is a water, sewer, or solid waste condition that could adversely impact human health, but has not affected it at that time. Health impacts and health hazards can vary for different deficiency levels.

- 30 Points Documented health impact(s), such as waterborne disease outbreak.
- 22 Points Suspected (undocumented) health impact; e.g., noncompliance with maximum contaminant levels (MCLs) in the national primary drinking water standards and suspected health impact, or, failing drainfield and suspect direct human contact with wastewater.
- 15 Points No known or suspected public health impacts, but potential health hazard may exist; e.g., noncompliance with MCLs in the national primary drinking water standards or accepted public health standards, or violating NPDES permit requirements, but no health impact suspected.
- 0 Points No health impact, no known health hazard, meets all applicable standards.

Note: Prorate for seasonal or intermittent use of existing sanitation facilities. Also, prorate if not all homes to be served fall under the same benchmark description above. Since most of the cost of the project should be to address conditions within one deficiency level, there is no need to prorate if only a water or sewer or solid waste project.

(2) Existing Deficiency Level: (0 to 18 Points)

Select the deficiency level which most closely fits the deficiency situation to be resolved. See Section 6 and Appendix E for additional guidance and deficiency level definitions.

18 PointsDeficiency levels 5 or 4

12 PointsDeficiency level 3

6 PointsDeficiency level 2

0 PointsDeficiency level 1

(3) Adequate Previous Service: (0 to 4 Points)

"Adequate Previous Service" means that piped water and sewer were brought into the home (except for some remote arctic and desert locations) by IHS or with other Federal funds and that the sanitation facilities provided met the existing standards at the time. Outside hand pumps and pit privies, previously provided, are considered to be inadequate. Adequate individual systems to be replaced with community systems are to be considered previous service.

4 Points No previous service from IHS or any other Federal agency or previous service was not adequate.

2 Points Half of homes adequately served (either water or sewer or both) by IHS or other Federal agency in previous projects.

0 Points All homes adequately served by IHS or other Federal agency (water and sewer) in previous projects.

(4) Capital Cost: (-20 to 16 Points)

Compare the unit cost of the proposed facilities to the **average unit cost** (not the allowable unit cost) of all water, sewer, and solid waste services in your Area (if necessary, adjust for inflation). Look separately at water, sewer, solid waste, and O&M unit costs for this project and prorate score. For scoring purposes, the unit costs of projects which primarily upgrade existing community facilities must be compared with a reduced average unit cost for the Area. Each IHS Area makes relative determinations of unit costs that can be supported and includes parameters unique to that Area.

- Note:
 - Future homes cannot be used to calculate unit costs.
 - Unit costs should consider the number of eligible AI/AN homes that are served by project contributions from other agencies.

16 Points.....This project will provide facilities at a much lower unit cost than the average unit costs for all water, sewer, and solid waste services in this Area; e.g., at least 50 percent lower than average unit cost.

8 Points.....This project will provide facilities for a unit cost lower than the average unit costs for all water, sewer, and solid waste services in the Area; e.g. 25 percent lower than average unit cost or less.

0 Points.....This project will provide facilities at or near the average unit cost for the Area.

-8 Points This project will provide facilities for a unit cost greater than average unit cost for all water, sewer, and solid waste services in the Area; e.g., within 25 percent greater.

-16 PointsThis project will provide facilities for a unit cost significantly more than the average unit costs (e.g., twice the average unit cost) for all water, sewer, and solid waste services in the Area.

-20 PointsProjects which the Area considers not to be economically feasible, either for initial capital or O&M costs, should receive this score. Projects with unit costs exceeding the allowable unit cost should also be scored -20.

(5) Local Tribal Priority: (0 to 16 Points)

- Note: Tribal consultation is required.

Tribal priority setting should be based on established tribal procedures which give consideration to health conditions.

16 Points The Tribe's highest priority (or only) SFC project.

12 Points The Tribe's second highest priority SFC project.

8 Points The Tribe's third highest priority project.

4 Points The Tribe's fourth highest priority project.

0 Points All other proposed projects for that Tribe.

The method of scoring for the local Tribal priority may be modified appropriately to meet the specific needs of the Area; e.g., Areas serving only one Tribe or Areas with a tribally established organization which evaluates projects and recommends priorities.

The tribal priority factor is intended to give the tribe an opportunity to adjust the priority of projects for its tribe. The tribal priority factor is not intended to give one tribe an advantage over another tribe for funding projects with comparable health impact.

Areas may utilize the local conditions factor scoring to compensate for inequities.

The following scoring guidelines are optional and may be used by the Area to set priorities for proposed projects that have very similar deficiencies.

(6) O&M Capability: (0 to 16 Points)

Determination of O&M capability is somewhat subjective and based on past performance and current tribal intent and capability. The "ability to afford" the proposed facilities should be factored into the score also. Refer to "O&M Organization Capability Policy" in Section 5 of these guidelines for specific capability criteria.

16 Points There is an excellent chance that the facilities provided in the proposed project will be operated properly and maintained in a good state of repair yielding the greatest possible health benefits.

10 Points There is a reasonable chance that the facilities provided in the proposed project will be operated properly and maintained in a good state of repair yielding sufficient health benefits.

0 Points There is a poor chance that the facilities provided in the proposed project will be operated properly and maintained in a good state of repair thus yielding no health benefits.

(7) Contributions: (0 to 8 Points)

The "Tribal Contributions" factor is optional per collective tribal consultation and should be applied uniformly for all tribes and all projects across the Area. Prorate points based on amount of contributions received from others. The contributed funds must be available to be spent during the next fiscal year.

8 Points 50 percent or more of the project costs normally funded by IHS are other than IHS funds (count contributions for IHS eligible homes only).

4 Points 25 percent of the project costs normally funded by IHS are other than IHS funds.

0 Points No funds other than IHS funds for construction.

(8) Local Conditions Factor: (0 to -15)

The "Local Conditions" scoring field should only be used as a negative value and only with specific tribal concurrence. Points for this factor should only be assigned in unusual situations and only by the Director, Division of Sanitation Facilities Construction, for the Area. The reason for assigning points to this factor must be documented and could include:

- The need to phase projects,
- Coordination with other agencies,
- Project impediments such as legal disputes or jurisdictional disputes,
- A backlog of current projects,
- Significant in-kind contributions,
- An emergency situation, or
- Necessary adjustments for the tribal priority factor scoring.

The documentation should be maintained in the Area office files.

9. **Non-SDS P.L. 86-121 Projects**

Tribes frequently request projects which may be eligible for funding under P.L. 86-121 but do not correct deficiencies as defined in SDS and do not require reporting to Congress. In addition, Area staff may identify potential future needs which should be recorded and monitored. This type of information may also be helpful to Headquarters in responding to Congressional and tribal inquiries relative to specific projects which are not included in the annual report to Congress or the agency funding plan.

Some non-SDS project examples include: (a) Projects to replace adequate individual water systems with community water supply facilities, (b) projects to replace adequate existing septic systems with community wastewater facilities, (c) projects to serve ceremonial areas, (d) projects to replace or upgrade adequate existing community facilities for political or other reasons, such as replacing an existing water source, and (e) projects to serve HUD homes, not otherwise eligible. Entering those types of projects in the SDS data system may be an effective way to maintain and monitor that information at the Area level, especially when there is a change in engineering staff. The non-SDS projects which are eligible for funding under P.L. 86-121 may be included in the SDS data base in the following way:

- Projects must be coded with an initial deficiency level "0" (DL0).
- The existing and proposed fields on the narrative form must include the reason for not reporting the project to the Congress.

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Appendices

Appendix A

- Economic Feasibility and Capital Cost
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Appendix F

- Copies of the Authorization Acts (P.L. 86-121; P.L. 94-437, Section 302)

Appendix A

Economic Feasibility and Capital Cost

Sanitation deficiencies are identified for all American Indian and Alaska Native (AI/AN) homes currently eligible for assistance under Public Law 86-121. The IHCA requires that IHS estimate the cost of correcting all of the sanitation deficiencies and provide this information to the Congress by specific project. IHS has defined adequate sanitation facilities to include safe and adequate water supply and wastewater disposal facilities for each home in addition to adequate solid waste disposal facilities and properly equipped and trained O&M organizations. Generally, adequate water supply and wastewater disposal facilities refers to piped systems. In some cases, providing "adequate" facilities to "all" American Indian and Alaska Native homes is not technically, environmentally, and economically feasible, especially for homes located in remote areas with harsh climate and unusual subsurface conditions.

IHS must estimate the cost of feasible sanitation facilities projects for budgetary and planning purposes. The IHS developed total allowable unit costs for each state to determine project feasibility, except for Alaska which has three total allowable unit costs. The total allowable unit cost is the maximum unit cost (including the costs incurred by IHS, by all other funding sources, and for all phases) for providing sanitation facilities for a home without sanitation facilities; i.e., the cost of raising the deficiency level (DL) of a home to DL1 (fully adequate water and waste disposal facilities). The current values of each state's total allowable unit cost are listed in Table A-2 of this appendix.

The total allowable unit costs are currently based on Department of Housing and Urban Development (HUD) Dwelling Construction and Equipment Cost (DCE) and the IHS Health Facilities Cost Index. The costs are not intended to reflect the value of sanitation facilities to a homeowner or the savings in health care costs resulting from improved sanitation facilities. The costs are based on the premise that the reasonable cost of the sanitation facilities to serve a home may be estimated based on the reasonable cost to construct a home in a particular location. (The value of safe water and sewer is relative to the value of basic shelter.) The total allowable unit costs will be adjusted periodically and different housing cost indices may be used in the future.

The procedure for determining Project Economic Feasibility is as follows:

1. The Area evaluates the economic feasibility of each project (all funding sources must be included; i.e., IHS funds and all other contributions to the project from any source to serve IHS eligible homes). To accomplish this, the Area must establish an allowable unit cost for the each specific type of facility (water, sewer, or solid waste) being proposed. The total allowable unit cost is the cost for constructing water, sewer, and solid waste facilities to an IHS eligible home without those facilities.

Allowable unit costs for homes with partial facilities must be determined by the proportion of the facilities being provided by the project. If the Area determines that a project is not economically feasible, a negative twenty (-20) should be entered in the capital cost score for the project. (Examples of determining economic feasibility are included later in this appendix.)

2. If the Area determines that a project is not economically feasible (infeasible), the project should be reviewed to determine if portions of the project may be feasible or if an alternative project may be feasible. Some examples include:
 - a. The water and sewer portions are feasible but the solid waste portion of a project is infeasible. Two projects should be submitted--a feasible water and sewer project and a infeasible solid waste project.
 - b. A watering point project may be feasible, but a project to provide piped water to homes may not be feasible. Two projects should be submitted--a feasible project for the watering point and a infeasible project for the piped water project.
3. Some proposed projects are dependent on the completion of other proposed projects. In those instances where a project is dependent on a infeasible project, the Area should code both projects as (-20) in the capital cost score.
4. IHS Headquarters, SFC Program, will review the Area economic feasibility determinations of all proposed projects and may identify additional projects to exclude from IHS funding plans for reasons of economic feasibility.
5. Areas will be advised of the projects that Headquarters is excluding from the Agency funding plan for reasons of economic feasibility and will be requested to adjust their data as follows:
 - a. Code projects identified as infeasible with a (-20) capital cost score.
 - b. Identify projects which are dependent on infeasible projects and code them with a (-20) capital cost score. (Those projects will be excluded from the Agency funding plan.)
 - c. Code any feasible portion of infeasible projects as separate projects. (The water supply part of a project may not be feasible; however, it may be appropriate to include the solid waste part as a separate project.)
 - d. Provide specific justification to Headquarters for including any infeasible projects in the 10-year funding plan.
 - Such projects should be in the top 25 percent (in dollars) of the Area's priority list.

- One or more phases of a total project to provide piped water and sewer may not be feasible; however, all phases considered as one project may be feasible.
 - Projects which provide services to homes at different deficiency levels may also result in projects that appear to be infeasible.
 - Projects with unit costs above the total allowable unit costs may be included in IHS funding plans, if recommended by the Area and approved by Headquarters.
- e. Include feasible alternative projects for the infeasible projects, where such projects are required to provide safe water or wastewater disposal for AI/AN homes; e.g., a piped water system may be infeasible, but a watering point may be feasible.

Identification of alternative projects to provide safe water and waste disposal facilities for AI/AN homes when total service projects are not economically feasible is necessary to enable Headquarters to prepare the Annual Report to Congress, including the IHS funding plans.

Using Total Allowable Unit Cost to Determine Economic Feasibility

The total allowable unit cost for a state or region must be allocated by type of facility (water, sewer, or solid waste) and by level of service being provided. That information is needed to determine economic feasibility for the purpose of establishing Agency and Area funding levels for budgeting and planning purposes. IHS Headquarters is currently using the following percentages to evaluate economic feasibility:

Table A-1. Evaluating Feasibility with Total Allowable Unit Costs				
Initial Deficiency Level	Final Deficiency Level	Percent of Total Allowable Unit Cost		
		Water	Sewer	Solid Waste
5	1	50%	50%	
4	1	50%	50%	
3	1	35%	35%	15%
2	1	20%	20%	10%

Example: A sanitation facilities project in a state with a total allowable cost of \$30,000 would have the following allowable costs:

Initial Deficiency Level	Final Deficiency Level	Allowable Unit Costs for:		
		Water	Sewer	Solid Waste
5	1	\$15,000	\$15,000	
4	1	\$15,000	\$15,000	
3	1	\$10,500	\$10,500	\$4,500
2	1	\$6,000	\$6,000	\$3,000

In this example, an initial DL5 project with final DL1 would have allowable unit costs of \$15,000 for water and \$15,000 for sewer. If the project had a solid waste component that provided DL3 to DL1 service for solid waste the allowable unit cost would be \$4,500.

If any project unit cost (water, sewer or solid waste) exceeds the allowable unit cost for that type of service and deficiency level, the project is coded as infeasible and excluded from Agency funding plans. The project unit cost mentioned in the previous sentence includes all costs from all sources associated with providing those IHS eligible sanitation facilities, not just IHS costs. All amounts and sources of funds for the proposed project must be shown in the appropriate field of the Funding screen in SDS, and the total of all sources of funds to serve IHS eligible homes will be used to determine economic feasibility.

Funding levels were not established for projects which do not provide complete service and a final DL1; e.g., a project to provide water system improvements has an initial DL3 and a final DL2, or a project to provide solid waste facilities has an initial DL3 and a final DL3. Areas should analyze those projects by combining all projects for the community to determine the total unit cost for water, sewer, or solid waste to provide the necessary facilities to raise the deficiency level to DL1 or DL0. The resultant unit costs should be compared with the allowable unit costs for the highest level of service that will raise the community to DL1. This procedure will be used by Headquarters to analyze such projects.

Initial DL1 projects are not included in the Agency funding plan, and there are no economic feasibility criteria for DL1 projects. In addition, there are no economic feasibility criteria for equipping and training O&M organizations.

The percentages of total allowable unit costs used to define economic feasibility may be adjusted by Headquarters in the future.

SDS Total Allowable Unit Costs
(January 30, 2001)

Total allowable unit costs (caps) for the Sanitation Deficiency System (SDS) are used in the SDS to determine economic feasibility of proposed projects. Economic feasibility is one of the major determining factors for overall feasibility of SDS projects. If a project is deemed to be feasible, then it becomes part of the funding plan for an Area and for Indian Health Service (IHS). The SDS caps were established in consultation with the Regular Funds Allocation Workgroup of the Sanitation Facilities Construction Program.

Developing the Unit Cost Caps

The IHS Health Facilities program uses the IHS Facilities Cost Index to estimate costs of constructing health facilities at various IHS locations. A consultant developed and routinely updates the IHS index using construction-estimating methods.

The Department of Housing and Urban Development (HUD) developed a cost database specifically for Indian Housing under the Native American Housing Assistance and Self Determination Act of 1996 (NAHASDA). The new NAHASDA cost data is called the Dwelling Construction and Equipment Cost (DCE) and is listed by Tribe and by State. The DCE is limited by regulation to the cost of the dwelling and equipment within 5 feet of the house and does not include other costs such as the cost of administration, streets, land acquisition, water or sewer. The DCE is specific for Indian country and is the best data, at this time, for developing caps.

DCE was applied with the IHS Facilities Cost Index to calculate indexes by state. The data was normalized to North Dakota for these calculations; i.e., North Dakota was given an index of 1. Since the DCE does not include development costs, a determination was made to calculate the unit cost based on 50% of the DCE averages. The new caps were found to be very close to those calculated using the older HUD Total Development Cost (TDC) method.

The SDS caps were calculated, using DCE, for all states and the caps went up in every state except Alaska. The average increase excluding Alaska was approximately 18%. The caps were discussed at a meeting of the Regular Funds Allocation Workgroup on March 18, 1999. Representatives of 10 IHS Areas attended this meeting, including Anchorage. After much discussion, an agreement was reached to use the DCE-based methodology that would raise each state a minimum of 18% over the current caps.

The DCE-based methodology was used to calculate the caps in Table A-2. The overall average increase was 21%, which amounts to a 2.8% annual increase compounded over the last seven years.

Effects of Unit Cost Caps Increase

The new caps increase the national funding plan (feasible projects) for SDS. Using the new caps and applying them to end of year 1998 SDS data, the funding plan would increase approximately \$45 million from \$696 million to \$741 million. The new caps affected the distribution of funds slightly.

A review of the 1998 SDS data using the new caps showed that only a few infeasible projects became feasible, and most currently infeasible projects exceed the caps by significant amounts. The more long-term effect will be that Areas will be able to make inflationary increases to the estimated cost of feasible projects in the SDS, thus increasing the funding plan.

Recommendation

The caps should be adjusted on a regular basis, with an annual review of the cost indexes to determine the impacts of inflation on the construction industry. Based on annual review of the construction indexes the caps could be changed whenever the indexes indicate a 5% increase.

Table A-2
SDS Total Allowable Unit Costs by State

State	Allowable Unit cost
Alabama	\$35,000
Alaska (1)	\$64,500
Alaska (2)	\$85,500
Alaska (3)	\$106,000
Arizona	\$40,000
California	\$43,500
Colorado	\$39,000
Connecticut	\$51,500
Florida	\$36,500
Idaho	\$40,000
Iowa	\$38,000
Kansas	\$36,500
Louisiana	\$33,000
Maine	\$40,500
Massachusetts	\$51,500
Michigan	\$39,500
Minnesota	\$40,500
Mississippi	\$31,500
Montana	\$40,000
Nebraska	\$36,500
Nevada	\$43,000
New Mexico	\$39,000
New York	\$44,000
North Carolina	\$34,500
North Dakota	\$38,000
Oklahoma	\$33,000
Oregon	\$41,000
Rhode Island	\$51,500
South Dakota	\$36,000
Texas	\$33,500
Utah	\$39,000
Washington	\$43,000
Wisconsin	\$39,500
Wyoming	\$38,000

Appendix B

Community Deficiency Profiles

The Community Deficiency Profile of SDS is the starting point for developing projects that will raise the deficiency level of AI/AN homes to DL1. All needs or deficiencies should be identified in a Community Deficiency Profile prior to developing SDS projects (project development is discussed in Appendix C).

The Community Deficiency Profile data must be accurate and should account for every AI/AN home in the community, regardless of eligibility, and the total number of homes should be the same for water, sewer, and solid waste when the homes at all deficiency levels are totaled. Existing community buildings and non-residential units may be listed in the Community Deficiency Profile, if they are tribally-owned and non-commercial.

Communities: The geographical area where homes have historically been considered eligible for P.L. 86-121 projects must be divided into communities.

- Community boundaries may not overlap.
- A specific home or location can only be located in one community, and data for that home must be entered on only one Community Deficiency Profile.
- Within the total geographical area described above, communities should be identified and profiles completed, including areas where homes have adequate sanitation facilities.
- Information clarifying community boundaries, or any other information that is of particular interest about a community should be entered into the "Descriptive Information" field.
- Enter location, description, or other information on specific groups or types of homes into the "Location Description" field.

Deficiency Level Determinations: Within the geographical boundary of the community, the total number of AI/AN homes must be categorized into one or more of the five deficiency levels (DL0 and DL1 are combined).

- Homes to be funded by IHS must meet the eligibility requirements under P.L. 86-121. Homes in non-Indian communities may have deficiencies which are not eligible for assistance under P.L. 86-121.
- Deficiency levels for homes are determined in accordance with criteria for water, sewer and solid waste outlined in Appendix E. O&M deficiencies are not used to determine deficiency levels for homes.
- Sanitation facilities serving the home are compared with the criteria for each deficiency level. Homes are counted at the highest initial deficiency level for which the criteria are met; e.g., if a home meets DL3 criteria for solid waste and DL4 criteria for wastewater disposal; that home is counted as DL4.

Number of Homes Without Water: The total number of homes without water is reported to Congress, annually. The number of occupied AI/AN homes in the community without potable water piped into the home is entered in this field. Guidance previously detailed in Section 4.d., Reporting Homes Without Potable Water, follows:

- Homes to be included are those that do not have piped water in the home (water is hauled) or have piped water in the home, but the water is not potable. This number also includes homes served by existing individual water systems with non-potable water.
- If the source of water is a community water system (EPA definition), potable means meeting EPA standards for community water systems (excluding monitoring requirements). For non-community water systems, potable means meeting the MCL's at the tap for primary contaminants (including coliform bacteria) set by EPA for community systems but not other regulations for community systems such as filtration or disinfection (e.g., a spring serving one home could be considered potable water without filtration).
- Types of homes to count include:
 1. Individual water supplies exceed EPA primary standard for arsenic.
 2. Individual water supplies exceed EPA standard for nitrate.
 3. Homes served by watering points.
 4. Homes served by water haul systems.
 5. Homes served by surface water source without treatment.
 6. Homes served by unprotected well or spring.

Note: Homes with water supplies that meet primary standards but exceed secondary standards are counted as homes with potable water.

SDS Data Consistency: Community Deficiency Profile data and project data are entered independently; however, the data must be consistent between the data entered on the project Housing form and the Community Deficiency Profile form. The Community Deficiency Profile form should show all the AI/AN homes in the community, regardless of eligibility, including information on:

- Location or description,
- PDS type of home,
- IHS eligibility,
- Number of homes,
- Type of service and their respective existing or initial deficiency levels,
- Comments on the homes, and
- IHS eligibility comments (e.g., why normally ineligible homes are listed as eligible).

Theoretically, Areas should have fairly precise information entered into the Community Deficiency Profile for all communities in their service area. As new SDS projects are developed or funded, the appropriate adjustments should be made to the Community

Deficiency Profile to reflect those changes; e.g., changes in initial deficiency levels for the type of service provided by the SDS projects for that community.

Guidance and Examples

- a. Community identification data (i.e., community number, community name, Area, service unit, tribe, and reservation) are standard IHS codes.
- b. Descriptive Information - This field should provide a brief description of the geographical area covered by the community and possibly its location, for example:
 - i. Community of Towaoc (located 12 miles south of Cortez)
 - ii. Rocky Boy Reservation scattered homes.
 - iii. Colville Reservation in Ferry and Okanaogan Counties.
 - iv. Southwest part of Oregon, bordering California, Klamath Tribal members reside in rural areas of Klamath County.

To prevent double counting, Areas should not create any reservation-wide or county-wide Community Deficiency Profiles that describe homes in multiple communities. While reservation-wide and county-wide projects are allowed, each community must have a separate Community Deficiency Profile.

- c. Deficiency Level Information (Location Description, PDS Home Types, Number Homes, Water IDL, Sewer IDL, Solid Waste IDL, Comments, IHS Eligible Comments).
 - The comment field should be used to note information pertinent to the homes at that location; e.g., multiple projects needed to correct deficiencies, the SDS numbers of projects that address the deficiencies.
 - Use the IHS Eligible comments field to note why ineligible homes are marked as eligible for service from IHS, and vice versa.

The total number of AI/AN homes located within the community should be assigned deficiency levels in accordance with this guideline as shown in the examples below:

- i. Community A consists of 50 homes served by community water and sewer facilities. Deficiencies include: (1) an open dump for solid waste disposal, (2) the community water system storage does not meet current design standards, (3) a sewage lagoon discharge that does not meet permit requirements, (4) a water source that exceeds the primary drinking water standard for nitrate, (5) an O&M organization without adequate equipment or training, and (6) water storage tanks that need painting.

The deficiency levels relative to each deficiency are: (1) the open dump is DL3; (2) the water storage problem is DL2; (3) the sewage lagoon discharge problem is DL3; (4) the nitrate problem is DL4; (5) the O&M needs are not used to establish home deficiency levels, if this were the only deficiency the homes would be DL1 or DL0; (6) the water tank painting is DL1. The Community Deficiency Profile data could be entered as:

Community: Community A								
Location Description	Home Type	IHS Eligible	# Homes	Water IDL	Sewer IDL	Solid IDL	Comments	IHS Eligible Comment
Wailua	E1	Yes	30	4	3	3	HI07014-0101	
Kalihi	H3	Yes	20	4	3	3	HI07014-0102	

- ii. Community B consists of 50 homes served by community water and sewer facilities. The deficiencies consist of (1) equipment and training required for adequate O&M. (2) A municipal solid waste landfill which meets EPA regulations is nearby; however, residents of the community choose not to use the landfill to dispose of their solid waste.

The deficiency levels relative to each deficiency are (1) O&M needs are not used to establish home deficiency levels. (2) The solid waste deficiency is DL0. (An O&M capability project would be initial DL2 or DL3.) The type of deficiencies recorded on the Community Deficiency Profile would be DL0.

Community: Community B								
Location Description	Home Type	IHS Eligible	# Homes	Water IDL	Sewer IDL	Solid IDL	Comments	IHS Eligible Comment
Kalihi	H5	Yes	50	0	0	0		No deficiencies to report

- iii. Community C consists of 95 homes; 50 homes are on community water and community sewer, 25 homes are on community water and septic systems and 20 homes utilize individual wells and septic systems.

The deficiencies consist of (1) two homes with individual wells and septic tanks have surfacing drainfields and water sources that exceed the Primary Drinking Water Standard for arsenic; (2) five of the homes with community water and septic systems have surfacing drainfields (a project had been proposed to extend the community sewer system to serve these 5 homes plus 7 others currently utilizing septic systems). (3) 5 homes with individual wells and septic systems utilize water sources which exceed the secondary drinking water standards. (A project has been proposed to extend the community water system to serve these five homes plus five others on individual wells.)

The deficiency levels relative to each deficiency are (1) the two homes with individual wells and septic tank problems are DL5 (i.e., DL4 water and DL4 sewer). (2) The five homes with surfacing drainfields are DL4 and the other 7 included in the proposed project are DL0. (Homes with adequate sanitation facilities are DL0 even if included in a proposed project which will modify the existing facilities). (3) The five homes with water not meeting secondary quality standards are DL2 and the additional five homes to be served by the proposed project are DL0. (4) The remaining 71 homes are level 0 or I. The coding could be as follows:

Community: Community C								
Location Description	Home Type	IHS Eligible	# Homes	Water IDL	Sewer IDL	Solid IDL	Comments	IHS Eligible Comment
Wailua	H1	No	71	0	0	0		
Kalihi	E1	Yes	5	1	4	0	HI07014-0102	
Kalihi	E1	Yes	7	0	1	0	HI07014-0102	
Schofield	E1	Yes	5	2	0	0		
Schofield	E1	Yes	5	0	0	0		
Honolulu	E1	Yes	2	4	4	0	HI07014-0102	

- iv. Community D consists of 100 eligible homes; 50 homes are on community water and sewer, 25 homes are on individual wells and septic systems and 25 homes have no facilities. The deficiencies consist of (1) the twenty-five homes are hauling water and utilizing privies for waste disposal, (2) the 50 homes on community water and sewer utilize an open dump for waste disposal; the 50 scattered homes have no apparent solid waste disposal problems; (3) the water source for the community water system serving the 50 homes does not have the capacity to meet current design standards.

The deficiency levels relative to each deficiency are: (1) the water and sewer deficiencies for the twenty-five homes without facilities are DL5, (2) the solid waste deficiency is a DL3 deficiency for the 50 homes in the community. The other 50 homes have no solid waste deficiency. (A county-wide solid waste project has been proposed to provide a transfer station for the community). (3) the water source problem is a DL2 deficiency for the 50 community homes. The coding could be as follows:

Community: Community D								
Location Description	Home Type	IHS Eligible	# Homes	Water IDL	Sewer IDL	Solid IDL	Comments	IHS Eligible Comment
Wailua	E1	Yes	50	0	0	3		
Kalihi	E1	Yes	25	4	4	0	HI07014-0101	
Kalihi	E1	Yes	25	2	0	0	HI07014-0109	

Note that solid waste deficiency is recorded on the above Community Deficiency Profile where the homes are located, not in the county-wide community which is used to code the project to correct the deficiencies.

- v. Community E is a community incorporated in the state consisting of approximately 1000 homes served by a community water and sewer system and a municipal landfill. Approximately 100 Indian owned homes are located within the community or in the area immediately adjacent to the community. Approximately 75 of the Indian homes are on community water and a sewer system which has a sewage lagoon that requires expansion to comply with its NPDES permit. Twenty-five of these homes were previously served by IHS with an extension of the community water and sewer systems. Ten of the homes are connected to the community water system and have septic systems for waste disposal with wastewater surfacing from failed drainfields. Fifteen of the homes are in an area served by individual wells and septic systems. The septic systems appear to be adequate but the wells are low yield with inadequate quantities for domestic use. Water hauling is frequently required.

The deficiency levels relative to each deficiency are: (1) the 50 homes on the community water and sewer system that were not served by IHS are entered on the Community Deficiency Profile as DL0 or DL1, (2) the 25 homes served by the non-Indian community water and sewer facilities previously served by IHS are DL1 (a project to correct the sewage treatment plant problem is not eligible for P.L. 86-121 funding), (3) the 10 homes with surfacing drainfields are DL4 (a project to either replace the drainfields or to extend the community sewer system to serve these homes is eligible for P.L. 86-121 funding), (4) the homes with inadequate water supplies are also DL4 (a project for either adequate individual water systems or an extension of the community water system is eligible for P.L. 86-121 funding). The coding could be as follows:

Community: Community E								
Location Description	Home Type	IHS Eligible	# Homes	Water IDL	Sewer IDL	Solid IDL	Comments	IHS Eligible Comment
Kalihi	H1	No	50	0	0	0		ineligible HUD homes
Kalihi	E1	Yes	25	0	0	0		
Kalihi	H2	Yes	10	0	4	0	HI07014-0101	
Kalihi	E1	Yes	15	4	0	0	HI07014-0105	

- vi. Community F is a community of 50 scattered homes served by a washeteria and a sewage haul system. A community water and sewer system is economically feasible for forty of the homes. There are no economically feasible projects to provide water and sewer to the other 10 homes.

The deficiency levels relative to each deficiency are: (1) the forty homes which can be economically served with a community water and sewer system are DL5, (2) the 10 homes which cannot be economically served with piped water and sewer are DL4 for sewer and DL2 for water (Facilities specifically designed as centralized facilities for reasons of economic feasibility). The coding could be as follows:

Community: Community F								
Location Description	Home Type	IHS Eligible	# Homes	Water IDL	Sewer IDL	Solid IDL	Comments	IHS Eligible Comment
Wailua	E1	Yes	40	4	4	0	HI07014-0101	
Kalihi	E1	Yes	10	2	4	0	HI07014-0201	

- vii. Community G is a community covering 50 scattered homes. The homes have been served with a central watering point and on-site water storage facilities. The homes have been plumbed and have septic-tank absorption field systems. Piped water for the homes is not economically feasible. There are no other deficiencies.

The deficiency levels relating to the specific deficiencies are: (1) the wastewater disposal deficiency is (0 or 1) (the homes have adequate wastewater disposal facilities), (2) the deficiency relative to water supply facilities is DL2 (piped water is not economically feasible and an adequate central watering point exists). The coding could be as follows:

Community: Community G								
Location Description	Home Type	IHS Eligible	# Homes	Water IDL	Sewer IDL	Solid IDL	Comments	IHS Eligible Comment
Palau	E1	Yes	50	2	0	0	HI07014-0209	

Appendix C

Project Development

Each Area is required to identify proposed SDS projects to correct the sanitation facility deficiencies identified in the Community Deficiency Profiles. The IHCI requires that IHS provide cost estimates for correcting all deficiencies. For IHS to fulfill that mandate, cost estimates must be provided for each proposed SDS project, and updates to those cost estimates are required each year.

Economic Feasibility: Homes with deficiency levels of 1 or 0 (DL1 or DL0) have piped water and sewer facilities. Therefore, proposed projects must be identified to provide piped water and sewer to all homes that currently lack such facilities. Some of these projects are not economically feasible; however, proposed projects and the estimated costs must be reported to comply with Congressional requirements. When proposed projects to serve communities that consist of homes which cannot be economically served with piped water and sewer, the proposed SDS project should be phased to ensure the availability of safe water and wastewater facilities for the homes. The earlier phases could include watering points and sewage haul systems, and the non-economical piped water and wastewater project should be the last project phase for the community.

Projects to Exclude: Proposed SDS projects are intended to correct the sanitation deficiencies identified in the Community Deficiency Profiles. The following types of needs are not included in the Community Deficiency Profiles, and projects should not be proposed to address these needs:

- a. Future Development - Water and sewer facilities for areas planned for future housing development. (SDS needs are for existing sanitation deficiencies for existing homes.)
- b. Projected Needs
 - i. Anticipated or proposed future environmental regulations. (Deficiencies should be based on existing final regulations.)
 - ii. Anticipated future system replacement needs such as projecting septic tank absorption field failures.
- c. Replacement of adequate individual facilities (wells and septic systems) with community type facilities. The philosophy that community systems are preferable to individual systems is not justification for including such projects in SDS. A home with an adequately functioning individual well and septic tank system has no water and wastewater deficiencies.
- d. Replacement of asbestos-cement pipe. Asbestos-cement piping in water distribution systems is not considered a deficiency unless there are existing problems caused by pipe deterioration.

- e. Sanitation deficiencies for existing tribal community buildings, Pow-wow grounds, and ceremonial areas should not be listed as deficiencies on the Community Deficiency Profiles. Sanitation facilities for these types of buildings may be included in projects to correct deficiencies of facilities serving homes, if such inclusion is logical, practical, and efficient.
- f. Tribal clinics or schools deficiencies are not included in the Community Deficiency Profiles and are not eligible for funding under Public Law 86-121.
- g. Area Wide Projects - The specific deficiencies being corrected by the project must be identified for several reasons:
 - i. Projects cannot be prioritized properly unless the deficiencies to be corrected are identified.
 - ii. Proposed projects to correct all deficiencies must be included in the SDS data system, and funding to correct deficiencies can only be included in one project to prevent double counting.
 - iii. Funding required to correct deficiencies must be summarized and identified by tribe, reservation, community, etc., for presentation in the report to Congress.
- h. Funded Projects - Deficiencies should not be included in the Community Deficiency Profiles if funding has been identified to correct the deficiencies. This includes projects to be funded through the end of the fiscal year. (SDS is completed in July; deficiencies to be corrected by projects anticipated to be funded by the end of September should not be identified in SDS.) Funding may be from IHS or other sources. Both the deficiencies and the proposed projects to correct the deficiencies should be transferred to the PDS system as funded projects, and deleted from SDS.
- i. Operation and Maintenance Type Projects - SDS is not intended to include deficiencies expected to be of short duration; e.g., a well pump failure that the Tribe is expected to replace within a year, etc. Both deficiencies and projects to correct the deficiencies included in SDS should address existing on-going conditions.
- j. Interior plumbing repair and replacement projects - Plumbing repair and replacement needs are more appropriately addressed under BIA-HIP or other housing programs. Plumbing needs for homes without piped water and/or sewer should be included in the projects that provide these facilities.

O&M Capability Projects: The need for establishing O&M organizations and for equipping and training the staff of such organization are not identified as deficiencies on the community deficiency profiles. Authorization for IHS assistance with establishing, equipping, and training utility organizations and assistance with emergency repairs is included in a separate subsection of the IHCIA. Funding for these purposes has not been provided by Congress since this section was added in 1988. Identification of these needs in

the SDS is important in order to quantify these needs, include them in the Annual Report to Congress, and to establish priorities for any funding provided by Congress.

Funding for developing operation and maintenance capability may be included in (1) projects which provide facilities and correct other deficiencies, or (2) projects which only address O&M capability needs. Funding for establishment, training, and equipping of utility organizations is needed for efficient operation of the facilities provided by the project must be included in the project and identified for development of O&M capability. These needs may be addressed with appropriations provided for construction of sanitation facilities, as a component of the total project. Projects which only address O&M capability development should also be included in the SDS and prioritized; however, these projects will not be funded with funds appropriated for construction (these projects will be funded with any appropriations for O&M capability development).

Types of facilities and services that may be provided in O&M capability projects include operator training, management training, maintenance equipment, office equipment, start-up supplies and materials, maintenance schedule development, technical assistance, and renovations to utility organization office and warehouse space.

Facility improvements and those related items which are considered a part of the facilities should be included as construction projects and the cost allocated to water, sewer, or solid waste. Some examples include control systems, water meters, as-builts, electrical control schematics, and equipment operating instructions and maintenance guides.

Projects which only address O&M capability needs have initial deficiency level DL2 or DL3. Final deficiency levels may be DL1, DL2, or DL3. There are no economic feasibility criteria for these types of projects.

Project Scope: Each Area must determine which sanitation facilities are required to correct the deficiencies identified on the Community Deficiency Profiles and estimate the costs of those proposed sanitation facilities. This is accomplished by completing the appropriate SDS screen forms (Housing, Narrative, Funding, etc.) for each proposed project which addresses specific deficiencies of specific homes. All of the proposed projects for the Area combined should address all of the deficiencies identified on the Community Deficiency Profiles, in addition to O&M organization capability development needs. Separation of the total need into proposed projects is necessary for several reasons, including:

- a. To address the needs in an organized, effective, efficient manner.
- b. To establish priorities for available funding.
- c. To evaluate the economic feasibility of providing the required facilities.
- d. To allow for compilation and analysis of different parameters on an Area, reservation, state, and community basis for program management and reports to the Congress.
- e. To facilitate verification of data accuracy and reliability.

The Area divides their total need into proposed projects in the manner that will best meet its needs and the purposes for project development outlined above. The IHS data needs are best met when the proposed project or project phases conform to the following:

- a. Provides one type of sanitation facility or facility improvement; i.e., water, sewer, or solid waste. If needed, each project must include O&M capability costs for the facilities provided by the project.
- b. Corrects deficiencies which are initially at the same deficiency level; e.g., all DL4 deficiencies or all DL3 deficiencies, etc.
- c. Results in a final deficiency level of DL1 or DL0 for the facilities provided or improved by the proposed project; e.g., a project to correct water supply deficiencies would result in a final deficiency level of DL1 for the water supply facilities.

Higher priority projects (those with the possibility of funding prior to the next update) must be developed to allow for program implementation in an organized, effective, efficient manner. Those projects (top 20%) must have cost estimates within 10% of the actual costs. The data needs requirements outlined above should be followed when defining top priority projects and should be followed more extensively than for lower priority projects.

Appendix D**Sanitation Deficiency Coding Guidance**

Enter the data described below in the appropriate forms and fields of the SDS data entry screens: Housing, Narrative, Funding, Community Deficiency Profile. Additional guidance is provided in Appendix E.

1. Proposed Project Identification Data - Includes standard IHS codes used to identify project name, project number, sub-project and phase numbers, community, state, Area, Tribe, reservation, etc. Non-specific codes are listed in the drop-down menus for items with no standard codes.
2. Deficiency Levels, Initial and Final - Initial deficiency level and final deficiency level are based on the proposed sanitation facilities to be provided by the project not necessarily the home deficiency levels recorded on the community deficiency profiles. For example:

a. <u>Community A</u> has DL3 deficiencies for solid waste (open dump), DL2 deficiencies for water (additional water storage), DL3 deficiencies for sewage (overflowing lagoon), and DL4 deficiencies for water (contaminated water source).		
Possible projects and deficiency coding levels include:	Initial DL	Final DL
i. A project to close the open dump and provide a transfer station:	3	1
ii. A project to provide a transfer station without closing the open dump:	3	3
iii. A proposed project to correct the water source contamination problem. (Assume water storage problem still not corrected):	4	2
iv. A project to correct the water storage problem after correction of the water source contamination problem:	2	1
(A project to correct the water storage problem prior to correction of the water source contamination problem would be:	4	2
v. A project to correct the water system contamination problem and the water storage problem:	4	1
vi. A project to correct the sewage lagoon overflow problems:	3	1
Note: The proposed projects <u>above</u> are the preferred approach for data management purposes.		

The initial and final deficiencies for the following proposed projects are more difficult to establish:

For Community A, a project to correct the sewage lagoon overflow problem, the water contamination problems, and the water storage tank problem:

The initial deficiency level should be determined based on cost. (Data presentations and summaries are generally based on the cost to address specific deficiency levels; where costs to correct various deficiency levels are combined the total cost should be allocated to the deficiency level addressed by a majority of the cost):

(1) Assume costs of:	Initial DL	Final DL
water contamination = \$100,000	4	1
water storage = \$ 50,000		
lagoon overflow = \$ 50,000		
(2) Assume costs of:		
water contamination = \$ 50,000	3	1
water storage = \$ 20,000		
lagoon overflow = \$100,000		

- b. Community B has a number of homes with individual water systems which do not meet primary drinking water standards, a number of homes which do not meet secondary drinking water standards, and a number of homes which have adequate individual water supply systems. A proposed project is developed to serve these homes with a community water system or extension to a community water system. The initial deficiency level is determined based on the number of homes in each category.

		DL	Initial DL
i.	10 homes do not meet primary standards.	4	
	5 homes do not meet secondary standards.	2	
	5 homes have adequate facilities.	0	
	The initial project deficiency level should be coded as DL4. A majority of the cost addresses DL4 deficiencies. The homes with adequate facilities are not used in the determination of deficiency level and should not be coded as receiving service.		4
ii.	10 homes do not meet primary standards.	4	
	20 homes do not meet secondary standards.	2	
	50 homes have adequate facilities.	0	
	The initial project deficiency level should be DL2. A majority of the cost addresses DL2 deficiencies.		2
	The 50 homes with adequate facilities are not used in the determination of deficiency level and should not be coded as receiving service.		

3. Evaluating Deficiencies: The system for evaluating deficiencies and setting priorities based on the 8 evaluation factors was detailed in previous sections of this manual. Adequate review and adjustment of the evaluation factors at the Area office level is essential to ensure consistency in setting priorities and fairness.
4. Funding Sources and Cost Data: The project cost estimate must be divided into costs for each type of assistance--water, sewer, solid waste, and O&M capability. The costs entered include IHS costs and all other funds (other federal, state, tribal, and non-governmental funds) required to complete the proposed project when evaluating economic feasibility.

Project cost estimates should also include costs to meet regulatory requirements. Those are the estimated costs to modify or replace existing facilities to bring those facilities into compliance with current environmental regulations. For example, if a sewage lagoon is overflowing and discharging to a stream in violation of the Clean Water Act, the estimated cost for corrective action would be included in the sewer cost of the proposed SDS project that addresses that deficiency.

5. Existing Deficiency: The existing deficiency fields are intended to provide adequate specific information to verify that the initial deficiency level coding is correct. Enter the information in the appropriate fields for water, sewer, solid waste, and O&M.
6. Proposed Facilities: Enter the information in the appropriate fields for water, sewer, solid waste, and O&M. The proposed facilities fields should provide information in sufficient detail for the reviewer to verify the appropriateness of the final deficiency level of the proposed project.
7. Examples of Type of Sanitation Facilities Service in SDS:
 - a. First Service Examples:
 - i. If a home was coded "first service" in the PDS system for water service, it cannot be considered first service for water in the SDS system.
 - ii. If a home has been coded "first service" for waste disposal for a project in the SDS system, it cannot be considered as first service in another proposed project in the SDS system.
 - b. SDS First Service and Previously Served Examples:
 - i. Community sewer facilities for homes currently served by failed septic tank systems installed under a previous IHS project.
Sewer - (previously served)

- ii. Community water system extension to serve homes previously provided wells by IHS and homes previously provided wells by HUD. Some water systems fail to meet secondary standards and some homes have adequate facilities.

- (1) Homes with adequate facilities are not coded as receiving service.

- (2) Homes with water systems not meeting secondary standards previously served by IHS and HUD are considered "previously served" for water. (All homes that have previously received "Federal" assistance, not just IHS assistance, are previously served.)
Water - (previously served)

- iii. Community water system development for homes previously served by a watering point under an IHS project and counted as homes served in the PDS system as first service.

- Water - (previously served)

- iv. Homes previously provided privies on an IHS project and coded in the PDS system as first service are to receive septic tanks and drainfields under the proposed project.

- Sewer - (previously served)

- v. Phase I of a project is a study of solid waste disposal options for a community which has never received assistance with a solid waste disposal project.

- Solid waste - (first service)

Phase II is development of a transfer station to serve the community.

- Solid waste coding - (previously served)

Phase 3 is closure of the existing solid waste disposal site.

- Solid waste - (previously served)

- 8. Housing and Community Deficiency Profile Entries: Enter the information for the numbers and types of homes (see table), initial deficiency level, final deficiency level, first service, and types of service, etc., as appropriate for each form.

- a. The Community Deficiency Profile should show all the sanitation deficiencies in that community, while the Housing Form shows which homes with sanitation deficiencies will be served by the proposed SDS project.

- b. State in the narrative whether the project homes will receive individual or community sanitation facilities for water and sewer, and

- i. State in the Community Deficiency Profile and the other narrative fields whether the solid waste disposal system is an open dump, sanitary landfill, transfer station, or other, such as off-reservation sanitary landfill.

Table D-1. Home Types based on original Funding Source	
Home Type	Description
E1	Existing Homes
E2	Non-Residential Units
E3	Non-Indian Units
H1	HUD Housing
H2	BIA Housing
H3	Tribal Housing
H4	State or Remote Housing
H5	Other Housing
H6	HUD - BIA Housing
H7	HUD Block Grant

Appendix E - Guidance on Assigning Deficiency Levels

Deficiency Level (DL)	Proposed Sanitation Facility Type	<u>LEVEL V (DL5):</u> Unsafe water supply <u>and</u> wastewater disposal facilities. Deficiency
5		Use Level IV (DL4) for water <u>and</u> Level IV (DL4)for sewer

Deficiency Level (DL)	Proposed Sanitation Facility Type	<u>LEVEL IV (DL4): Unsafe water supply or wastewater disposal facilities.</u> Deficiency
4	Water	No piped water in home (exception - designed water hauling system or central watering facility where piped water is not economically or technically feasible.), or
4	Water	Surface water with no filtration, or
4	Water	Surface water with no treatment, or
4	Water	Seasonal dry wells or springs, or
4	Water	Spring or well source incapable of providing drinking water that complies with regulations for microbiological contaminants, or
4	Water	Unprotected spring or well (open spring, open well), or
4	Water	Water does not meet all MCL's at the tap for primary contaminants set by EPA, or
4	Water	Major system component failure makes system inoperable; e.g., pump on an individual water system, water storage tank failure on a community water system, etc, or
4	Water	Water source providing less than 30 gpcd for more than 20 days per year, or
4	Water	Five psi pressure under dynamic water flow conditions occurs daily in the distribution system, or
4	Water	Individual water haul system with on-site storage and plumbing (and piped water is feasible), or
4	Water	Summer distribution system with watering point remainder of year, or
4	Water	Watering point or washeteria (improved facilities feasible), or
4	Water	An unusual situation where deteriorated water distribution/ storage/treatment/ source facilities makes system inoperable, or deteriorated facilities or facility components not correctable by routine maintenance will cause system failure within 2 years, or
4	Water	Water storage on a fill-and-draw system provides less than 1/3 of applicable gpcd design standard for community for period when filling is not possible, or
4	Water	Community water source provides less than 35 gpcd for 10 days during the year on a regular basis, or
4	Water	Community water system without water routinely for more than 10 days/year (inadequate facilities -no O&M problems).

Deficiency Level (DL)	Proposed Sanitation Facility Type	<u>LEVEL IV (DL4): Unsafe water supply or wastewater disposal facilities.</u> Deficiency
4	Sewer	No piped wastewater in home (privies), or
4	Sewer	Sewage surfacing from failed drainfield on individual site, or
4	Sewer	No sewage treatment facility. (Septic tank, or community sewage system has a discharge without treatment.), or
4	Sewer	Sewage treatment facility failure creating health hazard in residential area; e.g., sewage surfacing from community drainfield is accessible to residents, sewage discharge to a dry stream bed accessible to residents, or
4	Sewer	Documented ground water (drinking water aquifer) contamination by septic tank systems, or
4	Sewer	Sewer backups into homes caused by high groundwater in absorption system (every year occurrence), or
4	Sewer	Sewer backup into homes caused by construction design or deteriorating facilities at least 2 times per year, or
4	Sewer	Wastewater surfacing on individual home site continuously or minimum 20 days/year, or
4	Sewer	Routine raw sewage discharge to environment
4	Sewer	Deteriorated facilities or facility components not correctable by routine maintenance which will create DL4 conditions within 2 years; e.g., stream erosion of lagoon dike will cause failure and discharge of raw sewage, or
4	Sewer	Honey-bucket haul systems (individual or community), or
4	Sewer	Piped greywater only, or
4	Sewer	No piped wastewater (exception--utility authority sewage hauling program with on-site storage and plumbing), or
4	Sewer	Unrestricted access to partially treated sewage discharge to environment within 500 feet of occupied homes; e.g., a. Overflowing wastewater lagoons, b. Sewage surfacing from community drainfield.

Deficiency Level (DL)	Proposed Sanitation Facility Type	<u>LEVEL III (DL3):</u> Deficiencies related to environmental compliance, lack of solid waste disposal facilities, conditions where potential health threat is significant because facilities are not capable of routinely meeting standards to protect public health. Deficiency
3	Water	Significant problem with water quantity; system incapable of routinely maintaining established minimum pressure for public health: (i) May be source problem; (ii) May be storage problem; (iii) May be water main size problem, or
3	Water	Significant water leakage problems due to deteriorated piping or joints, or
3	Water	Environmental compliance problem with water system, or
3	Water	Individual wells or springs with yields of less than 1 gpm or less than 75 gpcd capacity, or
3	Water	Water distribution system leakage that exceeds 15 percent of the design flow for the entire system, or
3	Water	Water main breaks, water treatment facilities inoperable, or system without water for more than 4 times/yr caused by improper design, construction, or deteriorating pipe, or
3	Water	An unusual situation where deteriorated water distribution/ storage/treatment/ source facilities makes system inoperable, or deteriorated facilities or facility components not correctable by routine maintenance will cause system failure within 4 years, or
3	Water	Water pressure less than 10psi, 25% of the time or daily during peak use periods, or
3	Water	Utility authority water haul program with on-site storage and plumbing (feasible project for piped water), or
3	Water	Water storage tank leakage not associated with piping connections, fittings, controls, etc, or
3	Water	Water storage on a fill and draw system provides less than 2/3 of applicable design standard for gpcd storage for user population during non-fill period, or
3	Water	Treatment facility at full capacity (24 hrs/day) to meet gpcd domestic use for community facilities, or
3	Water	Corrosion control to comply with safe drinking water act requirements, unless required to meet MCLs, or
3	Water	Water treatment that does not comply with surface water treatment rule but meets MCLs, or
3	Water	Cross-connections with non-potable sources (distribution, storage, treatment, etc).

Deficiency Level	Proposed Sanitation Facility Type	<u>LEVEL III (DL3):</u> Deficiencies related to environmental compliance, lack of solid waste disposal facilities, conditions where potential health threat is significant because facilities are not capable of routinely meeting standards to protect public health. Deficiency
3	Sewer	System periodically incapable of complying with sewage discharge permit. (Facility related, not O&M), or
3	Sewer	Periodic sewer overflows due to inadequate system main sizes, or
3	Sewer	Contamination of groundwater due to deficient treatment facility; e.g., periodic percolation from sewage lagoons into groundwater prior to adequate treatment, or
3	Sewer	An unusual situation where deteriorated facilities not correctable by routine maintenance will cause failure of any sewer system component within 4 years and create a DL4 condition, or
3	Sewer	Utility authority sewage hauling program with on-site storage/plumbing and feasible piped sewage system, or
3	Sewer	Violations of discharge permit because of inadequate facilities more than 10% of the time, or
3	Sewer	Overflowing lagoon without discharge permits (total retention design) more than 10% of time, or
3	Sewer	Lagoon seepage at least 10 times current applicable standard in primary or secondary cell with ground water less than 50 feet below surface, or
3	Sewer	Progressive lagoon dike erosion not correctable by routine maintenance will cause dike failure within 3 years, or
3	Sewer	Dike seepage where seepage creates a continuous flow of sewage effluent in a defined channel, or
3	Sewer	Sewage treatment plant not complying with discharge permit because of inadequate facilities 10% of time, or
3	Sewer	Deteriorated sewage treatment plant component not correctable by routine maintenance will fail within 4 years and create DL4 conditions, or
3	Sewer	Primary lagoon cell does not hold any liquid, or
3	Sewer	Sewage treatment plant at capacity with current flow, or
3	Sewer	Sludge disposal facilities required to comply with new regulation, or
3	Sewer	Community drainfield with surfacing sewage effluent located more than 500 feet from occupied homes, or
3	Sewer	Documented ground water contamination by septic tank systems (not drinking water aquifer), or
3	Sewer	Sewage surfacing from drainfields at individual sites, or
3	Sewer	Cesspools or similar type facilities used for waste disposal, or
3	Sewer	Seepage pits for graywater without settling tanks, or
3	Sewer	Sewage lift station overflows--resulting from design, construction, or deteriorating facilities--more than 3 times per year, or
3	Sewer	Sewer overflows due to inadequate main sizes which occur more than 3 times per year, or

Deficiency Level	Proposed Sanitation Facility Type	<u>LEVEL III (DL3):</u> Deficiencies related to environmental compliance, lack of solid waste disposal facilities, conditions where potential health threat is significant because facilities are not capable of routinely meeting standards to protect public health. Deficiency
3	Sewer	Sewer system infiltration which exceeds 20% of the system design flow (sewer mains, wet-wells, manholes, service lines etc.). Continuous or at least 10 occurrences per year, or
3	Sewer	Sewer system exfiltration which exceeds 10% of system design flow (may be greater deficiency if causing contamination of drinking water aquifer, etc.), or
3	Sewer	Utility sewage haul systems with household plumbing connected to a storage tank and piped sewage feasible, or
3	Sewer	More than three sewer main breaks per year caused by improper design, construction, or deteriorating pipes, or
3	Sewer	Sewer main construction, design, or root problems which cause plugging with overflows more than 3 times per year.

3	Solid Waste	Disposal site in non-compliance with regulations due to major inadequacies in facilities or equipment, or
3	Solid Waste	Contamination of groundwater or surface water by solid waste disposal site, or
3	Solid Waste	Open dump; i.e., site does not meet EPA regulations for municipal solid waste landfill, or
3	Solid Waste	Landfill does not meet site location criteria, or
3	Solid Waste	Landfill with unrestricted access; i.e., no fence, or
3	Solid Waste	Scattered open dumping with no collection, transfer station or disposal site reasonably available and development of a solid waste management program for the Area is feasible and workable, or
3	Solid Waste	Solid waste management program never had adequate equipment to properly operate site.

Deficiency Level (DL)	Proposed Sanitation Facility Type	LEVEL II (DL2): Deficiencies generally related to providing improved service where facilities meet all environmental regulations and potential health threat is minimal and facilities are capable of closely meeting current standards established to protect public health. Deficiency
2	Water	Facilities that do not meet current design standards; e.g., additional water source, additional water storage, increase main size, includes need to increase system capacity, chlorination not required by current regulations, or
2	Water	Facilities that cause infrequent problems related to Public Health Standards; e.g., low pressure situations, or
2	Water	Facilities that fail to meet secondary drinking water standards, or
2	Water	Major deficient facilities that require replacement because of physical condition; e.g., main replacement, storage tank replacement, etc., or
2	Water	Facility deficiencies such as inaccurate as-builts or equipment operating guides, or
2	Water	Facilities that do not provide piped water in homes, which were specifically designed and constructed as centralized or water haul facilities, for economically feasible or technical considerations, or
2	Water	Individual wells or springs do not provide water meeting secondary drinking water standards, or
2	Water	Deteriorated individual water supply facilities not correctable by routine maintenance, or
2	Water	Deteriorated water mains not correctable by routine maintenance (see exceptions DL3 and DL4), or
2	Water	Current system operating pressure less than design standard of 20 psi, or
2	Water	Pumping cycle for pumps exceeds design standard; e.g., 16 hours, with a design standard of 12 hours, or
2	Water	Water meters needed and requested, or
2	Water	Deteriorated service lines require replacement, or
2	Water	Looping of water line required to correct water quality or pressure problems in system, or
2	Water	Direct line from water source to storage needed to correct water treatment or distribution problems, or
2	Water	Inoperable hydrants or gate valves require replacement, or
2	Water	Water main size does not meet current standards and is causing operational problems, or
2	Water	Watering point, washeteria, or water haul system with no feasible improved facilities project, or
2	Water	System leakage that causes operations problems, or
2	Water	Excessive pressure surges in water mains causing operational problems, or
2	Water	Additional flush hydrants to correct water quality problems, or
2	Water	Correcting problems with different overflow elevations on storage tanks, or
2	Water	Deteriorated water storage facilities not correctable by routine maintenance, or

Deficiency Level (DL)	Proposed Sanitation Facility Type	LEVEL II (DL2): Deficiencies generally related to providing improved service where facilities meet all environmental regulations and potential health threat is minimal and facilities are capable of closely meeting current standards established to protect public health. Deficiency
2	Water	Inadequate storage for current use; e.g., 1-day storage, design standard 2-days storage based on applicable gpcd design criteria, or
2	Water	Water storage facility for fill and draw system does not meet design standard for current use, or
2	Water	Fencing around water storage facilities, or
2	Water	Providing safety cages on water storage tanks, or
2	Water	Tank rehabilitation that requires more than normal maintenance associated with painting, or
2	Water	Storage tank coatings do not meet current standards, or
2	Water	Deteriorated water treatment facilities not correctable by routine maintenance, or
2	Water	Treatment units daily operating period exceeds current design standard; e.g., operating 20 hours/day, design standard 12 hours/day with applicable per capita consumption design standard, or
2	Water	Chlorination or fluoridation equipment needed to comply with current design standard (not required by regulations or because of history of microbial violations) , or
2	Water	Water treatment does not provide water meeting secondary drinking water standards, or
2	Water	Separate room for chemicals needed at water treatment facility, or
2	Water	Water treatment plant exceeds design life, has numerous operating problems, and requires replacement for efficient, effective operation, or
2	Water	Fencing around water treatment facility to meet design standard requirements, or
2	Water	Correcting iron bacteria problems, or
2	Water	Water source does not meet current design standard; e.g., one well current design standard, 2 wells needed for community water system (additional water source economically feasible), or
2	Water	Water does not meet secondary drinking water standards, or
2	Water	Surface water intake problem, or
2	Water	Fencing around water source, or
2	Water	Abandoning existing wells in accordance with standards, or
2	Water	Iron bacteria problems, or
2	Water	Well construction or spring development problems, or
2	Water	Well located in a floodplain causing operational problems, or
2	Water	Water source without automatic controls causing operational problems, or

Deficiency Level (DL)	Proposed Sanitation Facility Type	<u>LEVEL II (DL2):</u> Deficiencies generally related to providing improved service where facilities meet all environmental regulations and potential health threat is minimal and facilities are capable of closely meeting current standards established to protect public health. Deficiency
2	Water	Pollution source - water source separation, do not meet current standards, but no documented contamination problems on record, or
2	Water	Above ground well discharge causing operating problems, or
2	Water	Deteriorated water source not correctable by routine maintenance, or
2	Water	Deteriorated facilities not correctable by routine maintenance, or
2	Water	Water system components that do not meet current Area design standards. Water use and flows for determining system component deficiencies are based on current Area gpcd domestic use criteria. Excessive water use does not create deficiencies, or
2	Water	Control system modifications required for efficient, effective operation which are not causing operational problems, or
2	Water	Standby electrical power needs, or
2	Water	Cross connection problems with potable water sources, or
2	Water	Modification of facilities required to comply with seismic standards, or
2	Water	Modifications to increase efficiency and effectiveness, solve operational problems and reduce cost, or
2	Water	Water system component that is causing continuing routine operating problems and requires replacement (excessive maintenance required).
2	Water	Watering point, water haul system, or washeteria with no feasible improved facilities project.

Deficiency Level	Proposed Sanitation Facility Type	LEVEL II (DL2): Deficiencies generally related to providing improved service where facilities meet all environmental regulations and potential health threat is minimal and facilities are capable of closely meeting current standards established to protect public health. Deficiency
2	Sewer	Facilities that cause infrequent problems related to public health concerns; e.g., infiltration, exfiltration, etc., or
2	Sewer	Facilities that do not meet current design standards including reserve system capacity, or
2	Sewer	Facilities have potential for creating problems; e.g., replace septic tanks with community sewage facilities when there is high probability of future ground water contamination due to septic tank density, or
2	Sewer	Facility deficiencies such as lack of accurate as-builts or equipment operating guidance, or
2	Sewer	Abandoned on-site wastewater facilities not properly closed, or
2	Sewer	Septic systems which do not meet current design standards: a. high ground water; b. inadequate separation from water sources; c. small sites with no replacement alternative; d. structural damage to tank or subsurface disposal system, or
2	Sewer	No available site for septage (waste pumped out of septic tanks) disposal, or
2	Sewer	Tree and weed growth in bottom of lagoon because of facility deficiencies, or
2	Sewer	Lagoon dike seepage, or
2	Sewer	Lagoon dike erosion, or
2	Sewer	Deteriorated sewage treatment plant components not correctable by routine maintenance causing operational problems, or
2	Sewer	Old, unused sewage treatment facilities not properly abandoned, or
2	Sewer	Ocean outfall problems, or
2	Sewer	Lagoon organic loading exceeds standards, or
2	Sewer	Lagoon liner repair, or
2	Sewer	Single cell lagoon with operational problems, or
2	Sewer	Sewer systems including lift stations and force mains with overflow problems, or
2	Sewer	Inadequate sewer system as-builts, or
2	Sewer	Deteriorated sewer mains which are causing operational problems, or
2	Sewer	Deteriorated sewage lift stations causing operational problems, or
2	Sewer	Infiltration that exceeds 10% of design flow, or
2	Sewer	Exfiltration that exceeds 5% of design flow, or
2	Sewer	Sewer main root or construction problems which cause backups and/or overflows, or

Deficiency Level	Proposed Sanitation Facility Type	<u>LEVEL II (DL2):</u> Deficiencies generally related to providing improved service where facilities meet all environmental regulations and potential health threat is minimal and facilities are capable of closely meeting current standards established to protect public health.
		Deficiency
2	Sewer	Sewer service line root or construction problems, or
2	Sewer	Cleanouts needed on force main, or
2	Sewer	Utility sewage haul systems with household plumbing and on-site storage (piped sewage not feasible), or
2	Sewer	Sewage treatment and collection facilities that do not meet current design standards based on current flows, or
2	Sewer	Standby and emergency power needs, or
2	Sewer	Safety hazards to utility personnel associated with sewage lift stations, treatment plants etc, or
2	Sewer	Deteriorated sewage treatment collection or disposal facilities not correctable by routine maintenance, or
2	Sewer	Utility authority sewage hauling program with on-site storage and plumbing and no feasible piped sewer system.

2	Solid Waste	Facilities - collection and disposal facilities nearing capacity which require expansion, or
2	Solid Waste	Facilities without adequate equipment or equipment does not meet current standards, or
2	Solid Waste	Facilities or studies related to hauling off-site, or
2	Solid Waste	Inadequate collection equipment, or
2	Solid Waste	Transfer station needs (note a project to construct a transfer station is a DL2 project unless an existing DL3 disposal site is properly closed or use of the disposal site is terminated by restricting access or other means), or
2	Solid Waste	Inadequate collection system storage facilities, or
2	Solid Waste	Inadequate on-site storage of wastes, or
2	Solid Waste	Old dump site not properly closed with restricted access, or
2	Solid Waste	Improperly operated site because of lack of adequate equipment, or
2	Solid Waste	Inadequate storage facilities at site for site maintenance equipment, or
2	Solid Waste	Current landfill site will be at capacity within 4 years requiring new site, or
2	Solid Waste	Existing off-reservation non-tribal landfill closing within 4 years requiring transfer station or disposal site on reservation, or
2	Solid Waste	Site improvements needed to meet current design standards.

Deficiency Level (DL)	Proposed Sanitation Facility Type	<u>LEVEL I (DL1):</u> Deficiencies are related to routine repair replacement or maintenance needs.
		Deficiency
1	Water	Items such as painting water storage tanks, replacing standby pumps, equipment repair, or
1	Water	Correcting drainage problems around wells and springs, or
1	Water	Routine building repairs, individual or community, or
1	Water	Replacing well caps or well seals, or
1	Water	Fixing hydrants or gate valves, or
1	Water	Repairing minor leaks piping connections, control connections, etc, or
1	Water	Painting hydrants or treatment equipment, or
1	Water	Repairing or replacing markers, or
1	Water	Updating as-builts, or
1	Water	Repairing backup pumps, or
1	Water	Repairing fencing or replacing locks, or
1	Water	Replace chemical feed equipment.

Deficiency Level	Proposed Sanitation Facility Type	<u>LEVEL I (DL1):</u> Deficiencies are related to routine repair replacement or maintenance needs.
		Deficiency
1	Sewer	Items such as painting facilities, replacing standby pumps, equipment repair, or
1	Sewer	Repairs to individual systems, or
1	Sewer	Drainage control, or
1	Sewer	Weed control in lagoon dikes, or
1	Sewer	Repairs to backup equipment, or
1	Sewer	Repair to standby equipment, or
1	Sewer	Lagoon fencing repairs, or
1	Sewer	Sewage treatment plant painting, or
1	Sewer	Manhole repairs, or
1	Sewer	Lift station painting, or
1	Sewer	Repair to controls.

1	Solid Waste	Painting facilities, repairing fences, repairing equipment, replacing minor pieces of equipment, or
1	Solid Waste	Repairs to on-site buildings, or
1	Solid Waste	Fence repairs, or
1	Solid Waste	Painting needs, or
1	Solid Waste	Equipment repairs, or
1	Solid Waste	Maintenance on transfer stations.
1	Solid Waste	Indian-owned homes have access to municipal solid waste landfill but do not to use it.

Appendix F

Copies of the Authorization Acts (P.L. 86-121, P.L. 94-437 Section 302)

Public Law 86-121
86th Congress, S. 56
July 31, 1959

AN ACT

73 Stat. 267.

To amend the Act of August 5, 1954 (68 Stat. 674), and for other purposes.

Be it enacted by the Senate and House Representatives of the United States of America in Congress assembled, That the Act of August 5, 1954 (68 Stat. 674), is amended by adding at the end thereof the following new section:

"Sec. 7. (a) In carrying out his functions under this subchapter with respect to the provision of sanitation facilities and services, the Surgeon General is authorized -

(1) to construct, improve, extend, or otherwise provide and maintain, by contract or otherwise, essential sanitation facilities, including domestic and community water supplies and facilities, drainage facilities, and sewage- and waste-disposal facilities, together with necessary appurtenances and fixtures, for Indian homes, communities, and lands;

(2) to acquire lands, or rights or interests therein, including sites, rights-of-way, and easements, and to acquire rights to the use of water, by purchase, lease, gift, exchange, or otherwise, when necessary for the purposes of this section, except that no lands or rights or interests therein may be acquired from an Indian tribe, band, group, community, or individual other than by gift or for nominal consideration, if the facility for which such lands or rights or interests therein are acquired is for the exclusive benefit of such tribe, band, group, community, or individual, respectively;

(3) to make such arrangements and agreements with appropriate public authorities and nonprofit organizations or agencies and with the Indians to be served by such sanitation facilities (and any other person so served) regarding contributions toward the construction, improvement, extension and provision thereof, and responsibilities for maintenance thereof, as in his judgment are equitable and will best assure the future maintenance of facilities in an effective and operating condition; and

(4) to transfer any facilities provided under this section, together with appurtenant interests in land, with or without a money consideration, and under such terms and conditions as in his judgment are appropriate, having regard to the contributions made and the maintenance responsibilities undertaken, and the special health needs of the Indians concerned, to any State or Territory or subdivision or public authority thereof, or to any Indian tribe, group, band, or community or, in the case of domestic appurtenances and fixtures, to any one or more of the occupants of the Indian home served thereby.

(b) The Secretary of the Interior is authorized to transfer to the Surgeon General for use in carrying out the purposes of this section such interest and rights in federally owned lands under the jurisdiction of the Department of the Interior, and in Indian-owned lands that either are held by the United States in trust for Indians or are subject to a restriction against alienation imposed by the United States, including appurtenances and improvements thereto, as may be requested by the Surgeon General. Any land or interest therein, including appurtenances and improvements to such land, so transferred shall be subject to disposition by the Surgeon General in accordance with paragraph (4) of subsection (a) of this section: *Provided*, That, in any case where a beneficial interest in such land is in any Indian, or Indian tribe, band, or group, the consent of such beneficial owner to any such transfer or disposition shall first be obtained: *Provided further*, That where deemed appropriate by the Secretary of the Interior provisions shall be made for a reversion of title to such land if it ceases to be used for the purpose for which it is transferred or disposed.

(c) Project consultation and participation. The Surgeon General shall consult with, and encourage the participation of, the Indians concerned, States and political subdivisions thereof, in carrying out the provisions of this section.

SOURCE (Aug. 5, 1954, ch. 658, Sec. 7, as added July 31, 1959, Pub. L. 86-121, Sec. 1, 73 Stat. 267.)

Indians, sanitation facilities. 42 USC 2004a

Surgeon General. Powers.

Acquisition of lands.

Construction and maintenance.

Transfer and reversion of lands

Transfer of U.S. land.

[Public Law 94-437, Section 302; 25 U.S.C. 1632]

UNITED STATES CODE

TITLE 25 - INDIANS

CHAPTER 18 - INDIAN HEALTH CARE

SUBCHAPTER III - HEALTH FACILITIES

Sec. 1632. Safe water and sanitary waste disposal facilities

(a) Congressional findings

The Congress hereby finds and declares that -

- (1) the provision of safe water supply systems and sanitary sewage and solid waste disposal systems is primarily a health consideration and function;
- (2) Indian people suffer an inordinately high incidence of disease, injury, and illness directly attributable to the absence or inadequacy of such systems;
- (3) the long-term cost to the United States of treating and curing such disease, injury, and illness is substantially greater than the short-term cost of providing such systems and other preventive health measures;
- (4) many Indian homes and communities still lack safe water supply systems and sanitary sewage and solid waste disposal systems; and
- (5) it is in the interest of the United States, and it is the policy of the United States, that all Indian communities and Indian homes, new and existing, be provided with safe and adequate water supply systems and sanitary sewage waste disposal systems as soon as possible.

(b) Authority; assistance; transfer of funds

- (1) In furtherance of the findings and declarations made in subsection (a) of this section, Congress reaffirms the primary responsibility and authority of the Service to provide the necessary sanitation facilities and services as provided in section 2004a of title 42.
- (2) The Secretary, acting through the Service, is authorized to provide under section 2004a of title 42 -
 - (A) financial and technical assistance to Indian tribes and communities in the establishment, training, and equipping of utility organizations to operate and maintain Indian sanitation facilities;
 - (B) ongoing technical assistance and training in the management of utility organizations which operate and maintain sanitation facilities; and
 - (C) operation and maintenance assistance for, and emergency repairs to, tribal sanitation facilities when necessary to avoid a health hazard or to protect the Federal investment in sanitation facilities.
- (3) Notwithstanding any other provision of law -
 - (A) the Secretary of Housing and Urban Affairs is authorized to transfer funds appropriated under the Housing and Community Development Act of 1974 (42 U.S.C. 5301, et seq.) to the Secretary of Health and Human Services, and
 - (B) the Secretary of Health and Human Services is authorized to accept and use such funds for the purpose of providing sanitation facilities and services for Indians under section 2004a of title 42.

(c) 10-year plan

Beginning in fiscal year 1990, the Secretary, acting through the Service, shall develop and begin implementation of a 10-year plan to provide safe water supply and sanitation sewage and solid waste disposal facilities to existing Indian homes and communities and to new and renovated Indian homes.

(d) Tribal capability

The financial and technical capability of an Indian tribe or community to safely operate and maintain a sanitation facility shall not be a prerequisite to the provision or construction of sanitation facilities by the Secretary.

(e) Amount of assistance

- (1) The Secretary is authorized to provide financial assistance to Indian tribes and communities in an amount equal to the Federal share of the costs of operating, managing, and maintaining the facilities provided under the plan described in subsection (c) of this section.
- (2) For the purposes of paragraph (1), the term "Federal share" means 80 percent of the costs described in paragraph (1).
- (3) With respect to Indian tribes with fewer than 1,000 enrolled members, the non-Federal portion of the costs of operating, managing, and maintaining such facilities may be provided, in part, through cash donations or in kind property, fairly evaluated.

(f) Eligibility of programs administered by Indian tribes

Programs administered by Indian tribes or tribal organizations under the authority of the Indian Self-Determination Act (25 U.S.C. 450f et seq.) shall be eligible for -

- (1) any funds appropriated pursuant to this section, and
- (2) any funds appropriated for the purpose of providing water supply or sewage disposal services, on an equal basis with programs that are administered directly by the Service.

(g) Annual report; sanitation deficiency levels

- (1) The Secretary shall submit to the President, for inclusion in each report required to be transmitted to the Congress under section 1671 of this title, a report which sets forth -
 - (A) the current Indian sanitation facility priority system of the Service;
 - (B) the methodology for determining sanitation deficiencies;
 - (C) the level of sanitation deficiency for each sanitation facilities project of each Indian tribe or community;
 - (D) the amount of funds necessary to raise all Indian tribes and communities to a level I sanitation deficiency; and
 - (E) the amount of funds necessary to raise all Indian tribes and communities to zero sanitation deficiency.
- (2) In preparing each report required under paragraph (1) (other than the initial report), the Secretary shall consult with Indian tribes and tribal organizations (including those tribes or tribal organizations operating health care programs or facilities under any contract entered into with the Service under the Indian Self-Determination Act (25 U.S.C. 450f et seq.)) to determine the sanitation needs of each tribe.
- (3) The methodology used by the Secretary in determining sanitation deficiencies for purposes of paragraph (1) shall be applied uniformly to all Indian tribes and communities.
- (4) For purposes of this subsection, the sanitation deficiency levels for an Indian tribe or community are as follows:
 - (A) level I is an Indian tribe or community with a sanitation system -
 - (i) which complies with all applicable water supply and pollution control laws, and
 - (ii) in which the deficiencies relate to routine replacement, repair, or maintenance needs;
 - (B) level II is an Indian tribe or community with a sanitation system -
 - (i) which complies with all applicable water supply and pollution control laws, and
 - (ii) in which the deficiencies relate to capital improvements that are necessary to improve the facilities in order to meet the needs of such tribe or community for domestic sanitation facilities;
 - (C) level III is an Indian tribe or community with a sanitation system which -
 - (i) has an inadequate or partial water supply and a sewage disposal facility that does not comply with applicable water supply and pollution control laws, or
 - (ii) has no solid waste disposal facility;
 - (D) level IV is an Indian tribe or community with a sanitation system which lacks either a safe water supply system or a sewage disposal system; and
 - (E) level V is an Indian tribe or community that lacks a safe water supply and a sewage disposal system.
- (5) For purposes of this subsection, any Indian tribe or community that lacks the operation and maintenance capability to enable its sanitation system to meet pollution control laws may not be treated as having a level I or II sanitation deficiency.

